NAVY MEDICAL CARE STUDY
APPENDICES

Phase I

BY

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13. ABSTRACT

The resource costs of the inputs to the delivery of Navy medicine are presented in some detail and examined. The outputs are similarly reviewed. Such indicators as admissions, occupied bed days, and outpatient visits are analyzed and modified to make them comparable to similar indicators in the civilian sector. Finally, the incentives of the delivery of medical care as reflected in the rates of utilization of both inpatient and outpatient services are analyzed. The effects of different prices to the consumers and different budgetary methods are considered to better understand these differing rates of utilization. The effects of fully costing the resources, of using more adequate output measures, and changing the incentives of the system are discussed.

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Budgeting						
Cost Analysis						
Health Maintenance Organizations						

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APPENDIX A: THE EXTENT OF EXTENDED CARE

The two tables of this appendix compare the length of stay in Navy hospitals with that in the civilian section by categories of diagnosis.

The first table compares patients in the 20 to 49-year-old age groups. The civilian numbers are taken from the Professional Activity Study (PAS) of the Commission on Professional Hospital Activities.

For the Navy we report the diagnostic category, the number of admissions with the single diagnosis, the number of sick days associated with those admissions, and the average number of sick days per admission. Also reported is the average number of occupied bed days per admission, based on the adjustment which has been discussed previously. For the civilian sector, we have used the PAS tables to report the diagnostic category, the number of patients in the two age groups 20-34 years and 35-49 years, and their average length of stay, as well as the weighted average of the two. This sample is not exhaustive of either the PAS tables or of the Navy's DDDIC. In general we have had to combine several of the Navy's diagnostic codes to compare with one diagnostic category of the PAS system. Where we have had to do so, we have reported the number of admissions for each of the diagnostic codes and their average stays.

The following table presents further comparisons between the average length of stay of active duty personnel and those beneficiary groups receiving in-patient care through CHAMPUS. The source of the CHAMPUS data has been report M734 for the fiscal year 1972. The length of stay of military personnel was derived from Statistics of Navy Medicine, the source for the first table.

The average length of stay for each beneficiary group was compared with the average number of sick days. The average number of occupied bed days could be estimated by methods used in NMC-32, but were not tabulated. In some ways this comparison is superior to that between the PAS data base and the military due to the fact that the disease categories are more narrowly defined. The comparison is inferior to the PAS system in that the cases included both

single and complex diagnoses and we have been unable to make any age/sex adjustment which is not implied by the beneficiary categories into which the data points fall. However, the indication which was established in Chapter 4.0 is substantiated from the comparisons contained here.

TABLE A-1

Average Length of Stay by Diagnostic Category

	USN Sole Diagnosis					PAS Single Diagnosis Ages: 20-34 35-49		
Category	Admissions	Sick Days	Ave. Sick Days	Stay OBD's	Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category
I A. Resp. T.B. 001-008	22	1,652	75	65.8	2. Resp. T.B. 11.0-12.9	213 229 ‾442‾	20.8 19.8	20.3
ω B. Other T.B. 10-19	9	139	15.4	13.51	3. Non resp. T.B. 13.0-19.9	38 36 ‾74‾	10.2 15.1	12.6
C. Syphilis 20-29 D. GC & VD 30-39	24 190 ‾214‾	438 2,168	18.25 11.4 24.3	21.3	13. Syphilis & other VD 90-99.9	314 67 ‾381‾	5.5 6.2	5.6
E. Infectious dis., intestinal tract 40-49	559	6,085	10.9	9.6	1. Intestinal infectious dis. 1.0-9.9	11,570 7,288 ‾18,858‾	3.6 4.4	3.9
F. Strepto coccic sore throat	222	1,329	6.0	5.3	4. Strepto coccal sore throat 34-34.1	446 119 ‾568‾	4.2 4.2	4.2
F. Septicemia & Pyemia staphlococcus unspecified Bacterial toxemia	2 8 4 24 ‾38‾	15 113 135 122	7.5 14.1 8.8 5.1 7.5	6.6	5. Septicemia 38-38.9	97 65 ‾162‾	7.7 7.9	7.8

	USN						PAS		
Category	Admissions	Sick Days	Ave. Stay SD's	OBD's		Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category
H. Infectious mononucleosis	658	13,315	20.2	17.7		10. Infectious mononucleosis 75.0	1,102 126 1,228	7.1 7.5	7.1
H. Infectious hepatitis	341	15,957	46.8	41.1		9. Infectious hepatitis	4,492 1,160 5,652	11.0 12.4	11.3
H. Smallpox	12	54	4.5			8. Viral Diseases exanthem 50-57.9	213 140 353	5.3 6.0	5.6
Measles	1	6	6.0						
Rubella	229	798	3.5						
Chickenpox	37	375	10.1						
Herpes simplex	20	1,729	86.5						
Cowpox	299		9.9	8.7					
J. Typhus & other rickettsial	32	423	13.2			12. Rickettsiosis & other arthropod-borne disease 80-89.9	268 39 307	5.3 7.3	5.6
K. Malariae	497 529	6,846	13.8 13.7	12.0					
L. (None)									
L. Dermatophytosis (feet)	52	575	11.1			14. Mycosis 110-117.9	136 102 238	6.7 9.0	7.7
(other & unspec.)	31	216	7.0						
Coccidioidomycosis	3	98	32.7						
Cryptococcosis/ torulosis	1	2	2.0						
Histoplasmosis, (pulmonary)	4	123	30.8						
(other & unspec.)	5	488	97.6						
Moniliasis	5	67	13.4						
Fungus inf., nec.	8 110	151	18.9 15.6	13.7					

	USN					PAS		
Category	Admissions	Sick Days	Ave. Stay SD's	OBD's		Category	Total pts. n age group	Ave. Stay per age group	Ave. Stay for category
G. Spirochetal dis. exc. sphylis	32	499	15.6		16.	Other infective dis. 100-104, 130-136.0	252 133 385	8.0 7.6	7.9
L. Scabies	1	4	4						
Pediculosis	2	12	6						
Sarcordosis	29	1,047	36.1						
Reiter's Disease	18	661	36.7						
Exanthema Subitum	67	427	6.4						
Infective & Parasitic Dis,, Nec.	9 128	95	10.6 21.4	18.8					
III B. Diseases of thyroid gland	79	2,779	35.2	30.9	57.	Diseases of thyroid glanc 240-246.0	1,603 1,634 3,237	6.0 6.2	6.1
III D. Diseases of other endocrine glands	26	824	31.7	27.8	61.	Diseases of endocrine glands exc. thyroid & diabetes melitus 251-258.9	1,009 830 1,839	5.6 6.3	5.9
III E. Avitaminosis					62.	Avitaminosis & other nutritional deficiercies 260-269.9	72 138 336	7.9 8.9	5.3
Rickets	1	74	74						
Osteomalacia	1	5	5						
Steatorrhea & Sprue	15	263	17.5						
Malnutrition, unqual.	1	7	7.0						

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	USN				PAS			
Category	Admissions	Sick Days	Ave. Stay SD's	OBD's	Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category
Other & multiple deficiency states	3	6	2.0					
Obesity, not spec. of endocrine origin	25 / 46	659	26.4 / 22.0	19.3				
E. (Metabolic) Gout	20	165	8.3		63. Metabolic Diseases 270-279.9	577 / 742 / 1,319	5.8 / 6.3	6.1
Other metabolic dis., lipidosis, disturbance of lipid metab.	8	285	35.6					
Other	46 / 74	589	12.8 / 14.0	12.3				
IV Other Hemolytic anemias	12	266	22.2		65. Anemia exc. iron deficiency 281.0-285.9	1,106 / 717 / 1,823	6.8 / 7.7	7.2
Sickle cell	5	71	14.2					
Other spec. anemias	11	160	14.5					
Anemia, unspec.	2 / 30	13	6.5 / 17.0	14.9				
II Malignant neoplasm of buccal cav. & pharynx	7	226	32.3		17. Malignant neoplasm mouth, pharynx, esophagus 140-150.9	7 / 61 / not. op-68	3.1 / 10.6	9.8
					operated-	124 / 600 / 724 / 792	5.8 / 8.3	7.9 / 8.0

	USN					PAS		
Category	Admissions	Sick Days	Ave. Stay SD's	OBD's	Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category
II G. Benign neo-plasm, buccal cav., pharynx & other pts. of digestive sys.	18 15 33̄	458 326	25.4 21.7̲ 23.8̄	 20.9	40. Benign neo-plasm of buc-cal cav., pharynx & digestive sys. 210-211.9	81 169̲ 250̄-not op. 1,054 2,179̲ 3,233̄-oper. 3,483̄	3.5 4.0 5.0 5.8	 3.8 5.5̲ 5.5̄
II G. Benign neoplasm of resp. sys.	19	698	36.7	32.2	41. Benign neoplasm of resp. sys. 212-212.9	12 19̲ 31̄-not op. 344 616̲ 960̄-oper. 991̄	2.1 4.2 3.9 4.6	 3.4 4.3̲ 4.3̄
III A. Asthma	181	2,331	12.9	11.3	110. Asthma 493-493.9	2,319 2,779̲ 5,098̄	5.5 6.4	
VI Inflammatory dis. of central nervous sys. (exc. multiple sclerosis)	46	1,158	25.2		75. Inflammatory dis. of central ner-vous sys. 320-324.0	298 183̲ 481̄-not op. 133 268̲ 401̄-oper.	8.6 10.3 12.7 15.0	 9.2 14.2

		USN				PAS		
Category	Admissions	Sick Days	Ave. Stay SD's	OBD's	Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category
IV C. Other diseases of central nervous sys.	246	4,320	17.6	15.4	76. Central nervous sys. dis., exc. inflammatory 330-349.9	4,296 4,192 8,488	6.0 7.0	6.5
IV D. Diseases of nerves & peripheral ganglia	229	6,062	26.5	23.3	77. Peripheral nervous sys. disease 350-358.9	1,528 2,433 3,961	6.8 7.4	7.2
IV E. Inflammatory dis. of eye	192	2,656	13.8	12.1	78. Inflammatory dis. of eye 360-369.9	437 362 799	5.0 5.9	5.4
IV F. Strabismus	70	617	8.8	7.7	79. Strabismus 373-373.9	34 35 69	3.7 5.5	4.6
IV F. Cataract	21	585	27.9	24.5	80. Cataract 374-374.9	12 18 30-not op.	3.8 5.4	4.8
						501 3,101 3,602-oper.	5.4 6.3	6.2

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Category	Admissions	Sick Days	Ave. Stay SD's	OBD's	Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category
IV F. Glaucoma	10	191	19.1	16.8	81. Glaucoma 375-375.9	10 48 58-not op.	4.1 3.4	 3.5
						124 556 680-oper.	5.0 5.4	 5.3
IV F. Detachment of retina	11	482	43.8	38.4	82. Detachment of retina 376	7 9 16-not op.	4.6 2.6	 3.5
						236 361 597	7.6 8.1	 7.9
VII E. Hypertensive cardiovascular disease	16	507	31.7		89. Hypertensive dis. 400-405.0	1,686 3,721 5,357-not op.	5.1 6.0	 5.7
F. Other hypertensive disease	353 369	5,197	14.7 16.5	 14.5		532 795 1,327-oper.	6.5 7.0	 6.8
VIII C. Pneumonia	2,510	30,953	12.3	10.8	106. Pneumonia 480-486.0	6,356 6,000 12,356	6.7 7.5	 7.1

	USA					PAS		
Category	Admissions	Sick Days	Ave. Stay SD's	OBD's	Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category
VIII								
B. Influenza	579	2,276	3.9	3.4	105. Influenza 470.	1,245 1,016 2,261	3.8 4.4	4.1
IX								
B. Ulcer of stomach	78	1,946	24.9		116. Gastric, duo- denal & gas- trojejunal ulcer	8,951 12,357 21,308 -not op.	5.9 6.6	6.3
Ulcer of duo- denum	317	6,659	21.0					
Gastrojejunal ulcer	1 396	4	4.0 21.7	19.0	531.0-534.3	2,293 5,183 7,476 -oper.	12.2 12.9	12.7
IX								
C. Acute appendici- tis w/o peron- titis	490	7,995	16.3	14.3	119. Acute appendi- citis w/o perontitis 540.0	296 88 384 -not op.	2.7 3.9	3.0
						14,793 4,693 19,486 -oper. 19,870	5.0 5.8	5.2 5.1
X								
A. Nephritis & nephrosis	57	1,761	30.9	27.1	129. Nephritis & nephrosis 580-584	293 212 505 -not op.	7.2 8.4	7.7
						1,095 1,330 2,425 -oper. 2,930	4.0 3.1	3.5 4.2

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	USA					PAS		
Category	Admissions	Sick Days	Ave. Stay SD's	OBD's		Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category

	USA				PAS			
Category	**Admissions**	**Sick Days**	**Ave. Stay SD's / OBD's**		**Category**	**Total pts. in age group**	**Ave. Stay per age group**	**Ave. Stay for category**
XI A. Infections of skin & subcu-taneous tissue	3,221	26,936	8.7	7.6	172. Infection of skin & subcu-taneous tissue 680-684.0 886-686.9	1,915 <u>1,701</u> 3,616	5.2 6.4	5.8
XIII A. Arthritis & Rheumatism, exc. Rheumatic fever	491	9,342	19.0	16.7	175. Arthritis & Rhuematism 710-718.0	3,290 <u>5,382</u> 8,672	6.5 7.3	7.0
XIII B. Displacement of intevertebral disc	323	13,846	42.9	37.6	180. Displacement of intervertebral disc 725-725.9	4,469 <u>8,235</u> 12,704-not op. 13,184 <u>23,770</u> 36,954-oper. 49,658	8.4 9.1 12.0 12.6	8.9 <u>12.4</u> 11.5
XVI Symptoms, senil-ity, & ill-defined cond.	4,666	49,775	10.7	9.4	190. Signs, symptoms, & ill-defined conditions	22,303 <u>20,680</u> 42,983	4.1 4.6	4.3
XVII A. Fracture of: vault of skull base of skull face bones Other & unqual. skull fractures	 10 11 508 <u>13</u> 542	 117 175 15,086 <u>76</u>	 11.7 15.9 29.7 <u>5.8</u> 28.5	 25.0	191. Fracture of skull & face bones	546 <u>325</u> 870-not op. 4,862 <u>1,999</u> 6,861-oper. 7,731	4.2 4.9 4.3 5.0	4.5 <u>4.5</u> 4.5

	USA					PAS		
Category	Admissions	Sick Days	Ave. Stay SD's	OBD's	Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category
XVII A. Fracture & fracture dis- location of vert. col.(w/o spinal cd. lesion) (w/ spinal cd. lesion)	161	5,682	35.3		192. Fracture of vertebral column	2,188 1,604 3,792-not op.	8.8 9.7	9.3
	5 166	173	34.6 35.3	31.0		315 235 550-oper. 4,342	17.8 16.7	17.3 10.2
XVII C. Fracture of neck of femur	23	1,517	66.0	58.0	196. Fracture of upper end of femur 820-820.9	75 122 197-not op.	17.0 13.5	14.8
						379 783 1,162-oper. 1,359	16.5 16.7	16.6 16.4
XVII D. Dislocation w/o fracture	455	14,239	31.3	27.5	198. Dislocation w/o fracture 830-839.9	453 290 743-not op.	5.5 5.5	5.5
						6,402 3,475 9,877-oper. 10,620	5.4 5.9	5.6 5.6

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Category	Admissions	Sick Days	Ave. Stay SD's	OBD's	Category	Total pts. in age group	Ave. Stay per age group	Ave. Stay for category
XVII G. Internal inj. of chest, ab- domen & pelvis	82	1,205	14.7	12.9	201. Internal inj. of chest, ab- domen & pelvis 860-869.9	557 <u>209</u> <u>766</u>-not op.	4.7 4.9	4.8
						1,137 <u>485</u> <u>1,622</u>-oper. <u>2,388</u>	8.8 9.8	<u>9.1</u> <u>7.7</u>
XVII P. Burns	261	4,461	17.1	15.0	203. Burns 940-949.9	1,685 <u>1,004</u> <u>2,689</u>-not op.	7.4 8.6	7.8
						1,078 <u>690</u> <u>1.768</u>-oper. <u>4,457</u>	17.7 21.1	<u>19.0</u> <u>12.3</u>

TABLE A-2

LENGTH OF STAY

CHAMPUS (FY 1972) VS. NAVY (FY 1969)

	Total Admissions	Total Hospital Days	Average Stay
Simple Goiter (Code 240)			
Eligible Beneficiaries	81	421	5.2
Dep. of Active Duty	42	239	5.7
Retired Personnel	3	10	3.3
Dep. of Retired Personnel	36	172	4.8
Military Sick Days	2	85	42.5
Nontoxic Nodular Goiter (Code 241)			
Eligible Beneficiaries	230	1,184	5.0
Dep. of Active Duty	77	349	4.5
Retired Personnel	16	82	5.1
Dep. of Retired Personnel	146	753	5.2
Military Sick Days	15	367	24.47
Protein Malnutrition (Code 267)			
Eligible Beneficiaries	3	2	.7
Dep. of Active Duty	--	--	--
Retired Personnel	--	--	--
Dep. of Retired Personnel	1	2	2
Military Sick Days	2	8	4
Diabetes Mellitus (Code 250)			
Eligible Beneficiaries	2,227	18,176	8.2
Dep. of Active Duty	704	4,791	6.8
Retired Personnel	516	4,094	7.9
Dep. of Retired Personnel	1,007	9,291	9.2
Military Sick Days	374	13,576	36.3

	Total Admissions	Average Stay	Total Hospital Days
Bacillary Dysentery (ICD Code 004)			
Elibible Beneficiaries	35	6.3	222
Dep. of Active Duty	29	6.0	175
Retired Personnel	1	18.0	18
Dep. of Retired Personnel	5	5.8	29
Military Sick Days	72	11.24	809
Other Salmonella Infections (ICD Code 003)			
Eligible Beneficiaries	52	7.4	385
Dep. of Active Duty	32	8.6	275
Retired Personnel	5	7.0	35
Dep. of Retired Personnel	15	5.0	75
Military Sick Days	5	12.2	61
Pulmonary Tuberculosis (ICD Code 011)			
Eligible Beneficiaries	134	33.4	4,477
Dep. of Active Duty	49	33.1	1,623
Retired Personnel	40	37.0	1,480
Dep. of Retired Personnel	45	30.5	1,374
Military Sick Days	35	135.6	4,746

*Moderately Advanced

	Total Admissions	Average Stay	Total Hospital Days
Multiple Sclerosis (Code 340)			
Elibible Beneficiaries	275	47.0	12,914
Dep. of Active Duty	108	38.2	4,124
Retired Personnel	57	43.5	2,482
Dep. of Retired Personnel	110	57.3	6,308
Military Sick Days	30	50.0	1,500
Facial Paralysis (Code 350)			
Eligible Beneficiaries	79	6.1	484
Dep. of Active Duty	27	5.8	156
Retired Personnel	10	19.8	198
Dep. of Retired Personnel	42	3.1	130
Military Sick Days	17	71.76	1,220
Cataract (Code 374)			
Eligible Beneficiaries	769	5.4	4,174
Dep. of Active Duty	106	4.3	460
Retired Personnel	307	5.6	1,715
Dep. of Retired Personnel	356	5.6	1,999
Military Sick Days	53	41.13	2.180
Bronchopneomonia (Code 485)			
Eligible Beneficiaries	1,691	6.3	10,594
Dep. of Active Duty	1,196	5.9	7,026
Retired Personnel	101	8.6	868
Dep. of Retired Personnel	394	6.9	2,700
Military Sick Days	325	14.82	4,817
Influenza with Pheumonia (Code 471)			
Eligible Beneficiaries	54	6.0	325
Dep. of Active Duty	15	5.4	81
Retired Personnel	12	6.7	80
Dep. of Retired Personnel	27	6.1	164
Military Sick Days	19	13.95	265
Influenza with Digestive Manifestations (Code 473)			
Eligible Beneficiaries	21	5.2	110
Dep. of Active Duty	14	6.1	85
Retired Personnel	1	11.0	11
Dep. of Retired Personnel	6	2.3	14
Military Sick Days	37	5.14	190

	Total Admissions	Average Stay	Total Hospital Days
Streptococcal Sorethroat and Scarlet Fever (Code 034)			
Eligible Beneficiaries	143	4.6	654
Dep. of Active Duty	78	4.1	316
Retired Personnel	3	3.7	11
Dep. of Retired Personnel	62	5.3	327
Military Sick Days	276	9.76	2,693
Infectious Hepatitis (Code 070)			
Eligible Beneficiaries	383	9.3	3,564
Dep. of Active Duty	200	8.7	1,745
Retired Personnel	30	9.1	272
Dep. of Retired Personnel	153	10.1	1,547
Military Sick Days	682	42.09	28,707

	Total Admissions	Average Stay	Total Hospital Days
Aplastic Anemia (Code 284)			
Eligible Beneficiaries	24	7.4	178
Dep. of Active Duty	8	10.9	87
Retired Personnel	5	8.8	44
Dep. of Retired Personnel	11	4.3	47
Military Sick Days	2	76.0	152
Agranulocytosis (Code 288)			
Eligible Beneficiaries	33	9.9	326
Dep. of Active Duty	19	9.6	183
Retired Personnel	1	8.0	8
Dep. of Retired Personnel	13	10.4	135
Military Sick Days	2	8.5	17
Malignant Neoplasm of Nasopharynx (Code 147)			
Eligible Beneficiaries	14	11.0	154
Dep. of Active Duty	3	28.3	85
Retired Personnel	7	6.7	47
Dep. of Retired Personnel	4	5.5	22
Military Sick Days	2	53.5	107
Malignant Neoplasm of Pancreas (Code 157)			
Eligible Beneficiaries	93	16.2	1,502
Dep. of Active Duty	--	--	--
Retired Personnel	53	17.5	928
Dep. of Retired Personnel	40	14.4	574
Military Sick Days	4	13.5	54
Asthma (Code 493)			
Eligible Beneficiaries	1,855	7.9	14,674
Dep. of Active Duty	1,035	7.9	8,188
Retired Personnel	146	5.5	805
Dep. of Retired Personnel	674	8.4	5,681
Military Sick Days	353	19.47	6,873
Encephalitis, Myelitis, Encephalomyelitis (Code 323)			
Eligible Beneficiaries	106	18.6	1,970
Dep. of Active Duty	62	9.0	560
Retired Personnel	12	43.9	527
Dep. of Retired Personnel	32	27.6	883
Military Sick Days	71	20.15	1,431

	Total Admissions	Average Stay	Total Hospital Days
Ulcer of Stomach (Code 531)			
Eligible Beneficiaries	517	8.3	4,303
Dep. of Active Duty	90	8.9	797
Retired Personnel	195	8.1	1,571
Dep. of Retired Personnel	232	8.3	1,935
Military Sick Days	262	18.89	4,949
Acute Appendicitis (Code 540)			
Eligible Beneficiaries	62	10.9	673
Dep. of Active Duty	1,168	5.3	6,188
Retired Personnel	215	7.6	1,630
Dep. of Retired Personnel	1,117	5.7	6,338
Military Sick Days	830	18.51	15,364
Cellulitis of Finger and Toe (Code 681)			
Eligible Beneficiaries	62	3.2	201
Dep. of Active Duty	28	3.1	88
Retired Personnel	4	3.8	15
Dep. of Retired Personnel	30	3.3	98
Military Sick Days	326	11.47	3,740
Osteoarthritis (Code 713)			
Eligible Beneficiaries	618	9.8	6,076
Dep. of Active Duty	82	9.2	758
Retired Personnel	188	9.6	1,809
Dep. of Reitred Personnel	348	10.1	3,509
Military Sick Days	242	14.68	3,552
Fracture of Face Bone (Code 802)			
Eligible Beneficiaries	732	4.1	2,973
Dep. of Active Duty	309	3.7	1,130
Retired Personnel	72	5.0	358
Dep. of Retired Personnel	351	4.2	1,485
Military Sick Days	1,379	23.99	33,078
Fracture of Neck of Femur (Code 820)			
Eligible Beneficiaries	376	15.4	5,781
Dep. of Active Duty	88	13.5	1,191
Retired Personnel	65	12.6	822
Dep. of Retired Personnel	223	16.9	3,768
Military Sick Days	83	103.73	8 610
Burn Confined to Lower Limb (Code 945)			
Eligible Beneficiaries	128	10.4	1,336
Dep. of Active Duty	71	12.2	864
Retired Personnel	6	2.6	32
Dep. of Retired Personnel	51	8.6	440
Military Sick Days	125	18.62	2,328

APPENDIX B: COSTS OF EXTENDED CARE

The Office of Research and Statistics of the Social Security Administration
has commissioned a sample survey of skilled nursing homes in the United States.
The price estimates that were derived are included here as Table B-1 were for
1969. The average charge for the entire United States was $11.83 per day.
On average, larger nursing homes in terms of number of beds reported higher
prices per day. The prices also varied with the geographic region--the North
Atlantic division costing $15.14 a day, and the West Central divisions costing
approximately $9.60 per day. The government-owned nursing homes had the lowest
average daily rate of $10.59, and proprietary homes the highest, $12.10. Simi-
lar data is available by state. Table B-2 shows the average monthly charge for
skilled nursing homes qualifying under the Medicaid program for the participat-
ing states. The range of charges varies from a minimum in Oklahoma of $182
per month to a maximum in New York of $570. These were the average rates as
of January 1970. Although the average monthly charge for the entire United
States is not shown, we would estimate that it would be approximately $360,
based on the average daily charge of $11.83 (for 1969) and on a 30-day month.

We have also corresponded directly with Dr. Michael Fitzmaurice, of the Office
of Research Statistics of the Social Security Administration. He informed us
that the source of the above referenced estimates was a survey conducted by
Douglas Skinner and Donald Yett as part of their study, Estimates of Cost,
Revenue, Profits, Manpower Utilization, and Patient Dependency in Skilled
Nursing Homes [7]. Apparently this study has not yet been published. However,
Dr. Fitzmaurice was able to provide us with additional tables which are in-
cluded in this report. Table B-3, Selected Cost Profiles of Skilled Nursing
Homes, has the additional categorization by ECF (Extended Care Facility) and
Non-ECF. The difference between the two is that the proprietary ECF has
qualified to accept patients under Medicare, while the Non-ECF has not. These
requirements for certification are delineated in Title XIX of the Social Se-
curity Act, as well as elsewhere [1]. As one would expect, this higher quality
is associated with higher charges; generally from $4 to $5 per day. The table

TABLE B-1

AVERAGE CHARGE PER PATIENT DAY

Bed size and geographic division	Total	Type of control		
		Government	Voluntary	Proprietary
Total...............	$11.83	$10.59	$11.32	$12.10
Bed size:				
0-49.................	10.32	9.35	11.11	10.27
50-99................	11.89	8.73	16.63	12.30
100 and over........	12.72	11.28	11.82	13.48
Geographic division:				
New England.........	12.87	9.58	10.73	13.41
North Atlantic......	15.14	13.09	14.14	16.39
South Atlantic......	12.14	10.40	10.17	12.66
East North Central...	11.67	9.65	12.50	11.92
East South Central...	10.86	8.98	10.27	11.06
West North Central...	9.56	7.86	9.61	8.83
West South Central...	9.65	7.97	9.92	9.65
Mountain.............	10.35	12.02	11.45	9.98
Pacific..............	13.24	9.04	12.15	13.40

Source: [4], p. 74.

TABLE B-2

MEDICAID NURSING HOMES PAYMENT RATES

State	Average monthly rate (dollars)	State	Average monthly rate (dollars)
Alabama	NA	Montana	354.36
Alaska	*	Nebraska	290.00
Arizona	*	Nevada	480.00
Arkansas	NA	New Hampshire	540.00
California	302.53	New Jersey	NA
Colorado	322.51	New Mexico	NA
Connecticut	338.70	New York	570.00
Delaware	NA	North Carolina	NA
District of Columbia	NA	North Dakota	267.15
Florida	NA	Ohio	239.26
Georgia	219.19	Oklahoma	182.50
Guam	NA	Oregon	219.20
Hawaii	550.00	Pennsylvania	NA
Idaho	202.00	Puerto Rico	NA
Illinois	NA	Rhode Island	238.78
Indiana	NA	South Carolina	312.28
Iowa	393.00	South Dakota	236.01
Kansas	290.00	Tennessee	344.31
Kentucky	450.00	Texas	190.20
Louisiana	196.97	Utah	259.09
Maine	545.00	Vermont	421.27
Maryland	265.00	Virgin Islands	NA
Massachusetts	316.61	Virginia	416.00
Michigan	405.00	Washington	328.20
Minnesota	NA	West Virginia	228.00
Mississippi	NA	Wisconsin	377.75
Missouri	316.00	Wyoming	320.00

*Does not participate

Source: [4], p. 75.

SELECTED COST PROFILES OF SKILLED NURSING HOMES

Nursing Home Class	Average Total Cost Per Patient Day	Percentage of Total Cost by Category[a]			
		Fixed	Labor	Material	Other
Proprietary ECF, All U.S.	$13.42	21%	55%	14%	10%
" ", Northeast	16.24	20	58	12	9
" ", North Central	12.03	20	54	13	13
" ", South	12.05	20	51	17	12
" ", West	13.56	22	56	14	9
Proprietary NonECF, All U.S.	$ 9.11	17	56	17	10
" ", Northeast	11.28	18	56	15	10
" ", North Central	8.60	17	56	18	9
" ", South	8.12	15	54	18	13
" ", West	8.71	18	58	16	8
Nonprofit ECF, All U.S.	$14.51	13	64	17	6
Nonprofit NonECF, All U.S.	$ 9.87	9	64	18	9

Source: [7]

[a]See discussion in Part 1 for definition of categories. Percentages may not sum to 100.0% due to rounding.

shows that for the entire United States, proprietary ECF costs $13.42 per patient day, a proprietary Non-ECF costs $9.11, a nonprofit ECF costs $14.51, and a nonprofit Non-ECF costs $9.87.

Figures B-1 and B-2, also provided by Dr. Fitzmaurice, present the frequency distributions from which the above averages were derived. Again, the same definitions have been used for ECF and Non-ECF. The category, All Nursing Homes, is the sum of these two. Figure B-1 is based on the entire United States, while Figure B-2 shows regional differences. Much of the dispersion in Figure B-1 is a result of the regional differences. However, even Figure B-2 shows a large variance with several regions. This may be a result in large part due to the different mix of services that are provided by the various skilled nursing homes.

The Hospital Administrative Services of the American Hospital Association publish semi-annually six-month national comparisons of various revenue and expense elements for hospitals by their size and region. Additionally, they include six-month summaries for extended and nursing care institutions. In regard to their publication, they employ the following definitions:

Extended Care Institution: The primary function of the Extended Care Institution is to provide treatment for patients who require inpatient care but are not in an acute phase of illness; who currently require primarily convalescent or restorative services; and who have a variety of, or specified medical conditions.

Nursing Care Institution: The primary function of a Nursing Care Institution is to provide treatment services for patients who require inpatient care but do not currently require continuous hospital services, and who have a variety of medical conditions.

Special Services: This classification includes charges made for physician care, pharmacy, physical therapy, laboratory, radiology, recreational activities, rehabilitation, and other services (e.g., dental care, oxygen, and social services).

Figure B-1: FREQUENCY DISTRIBUTION OF AVERAGE TOTAL EXPENSES PER PATIENT DAY IN NURSING HOMES BY MEDICARE CERTIFICATION--1969
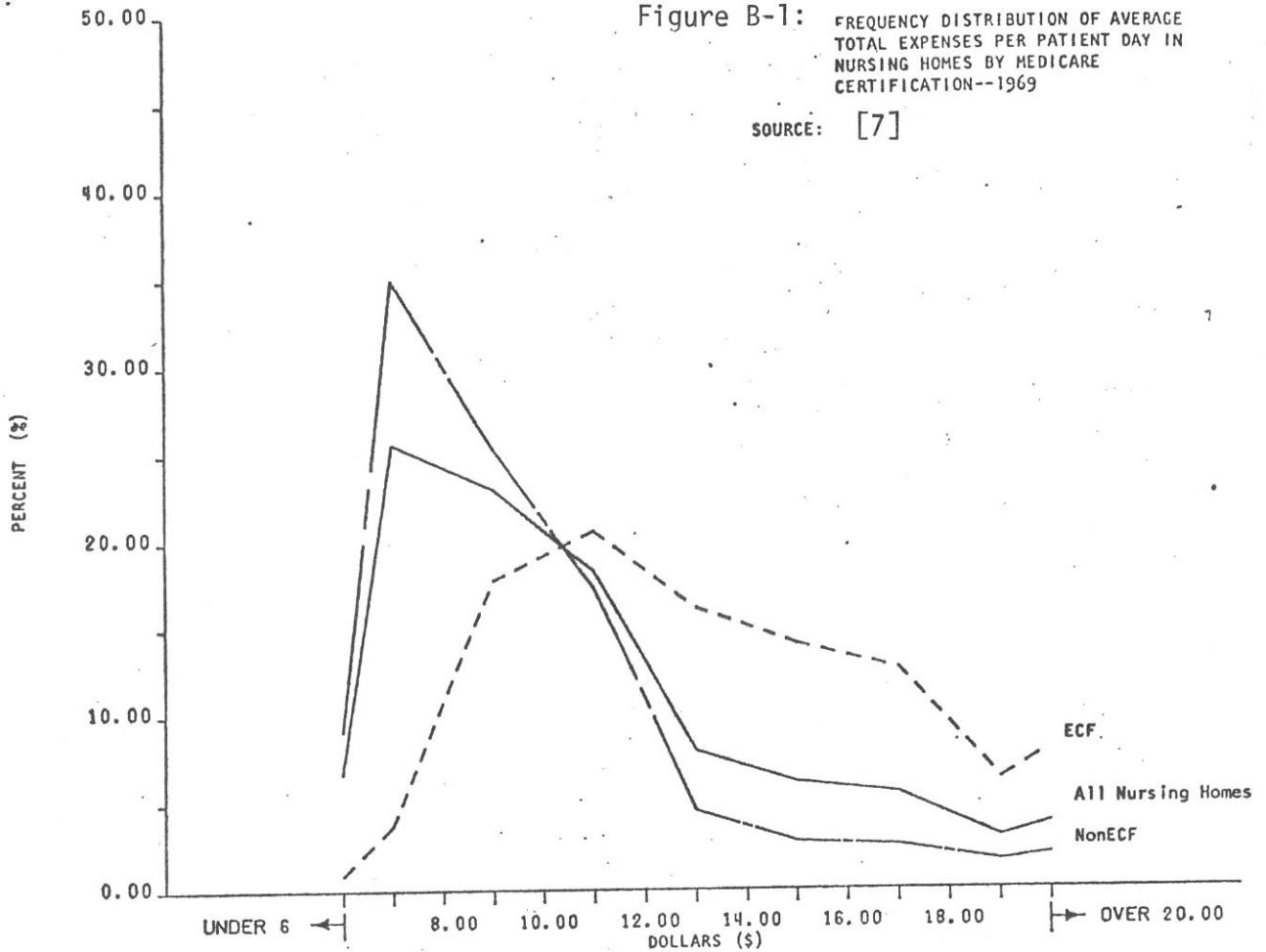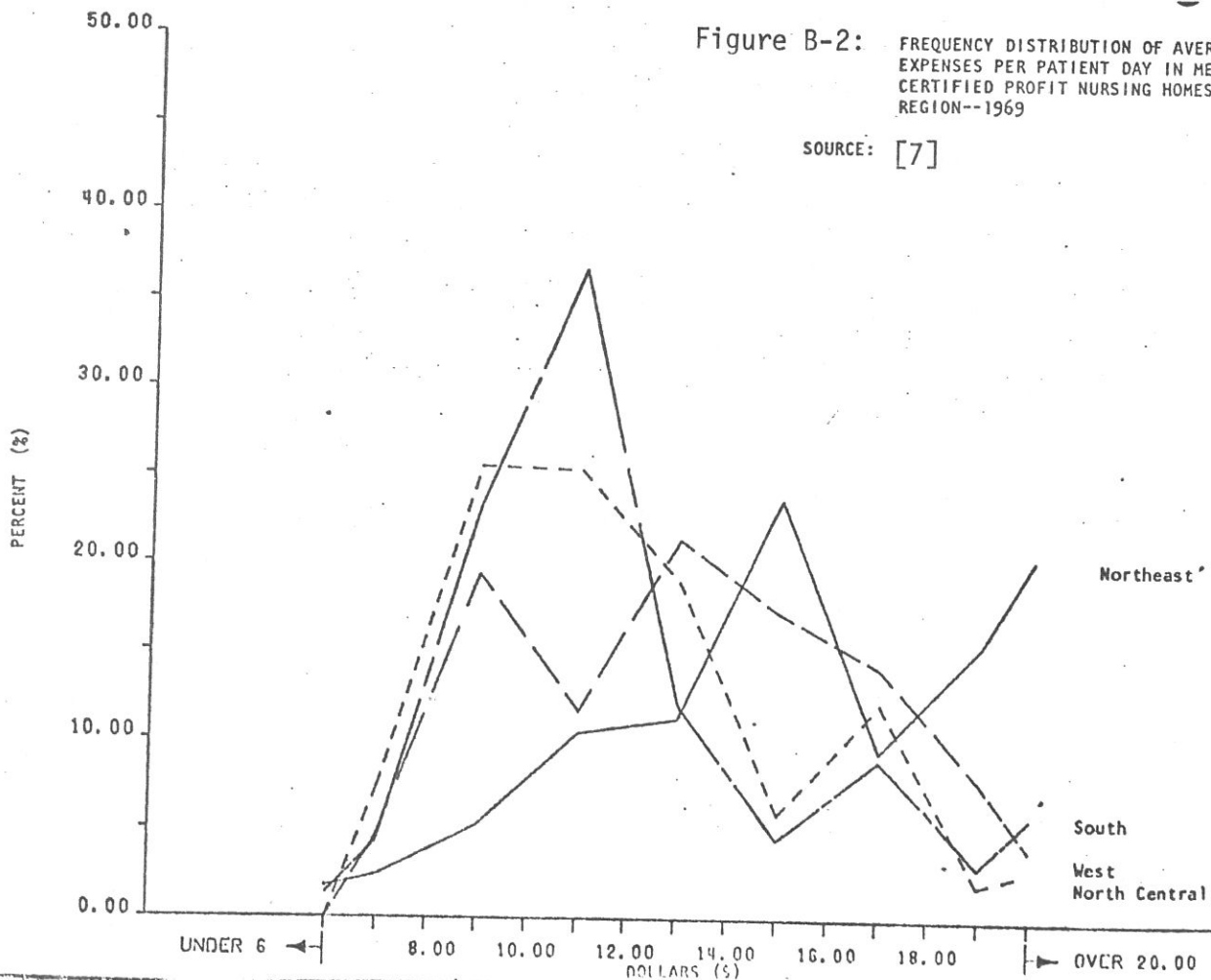
SOURCE: [7]

Figure B-2: FREQUENCY DISTRIBUTION OF AVERAGE TOTAL EXPENSES PER PATIENT DAY IN MEDICARE CERTIFIED PROFIT NURSING HOMES BY REGION--1969

SOURCE: [7]

The summary table for the six-month period ending December 31, 1972, for extended care institutions has been included as Table B-4. Some abbreviations are used there which perhaps require interpretation: PPD--Per Patient Day, PB--Per Bed, DC--Direct Cost, and MH--Manhours. The first line of that table shows that the range of average prices is from $15.09 to $20.93 for ECF's that are contained within the seven categories. This includes the routine daily charges as well as special services. Lines 10 and 11 show the proportion of registered nurses and licensed practical nurses to the total daily service staff. Registered nurses vary from 10 percent of the staff to in excess of 22 percent. LPN's vary from 11 percent to 23 percent of the staff. Combining these two categories we can see that the nursing staff varies from a minimum of 23 percent of the total staff to a maximum in excess of 36 percent. The total manhours per bed for the six-month period can be identified from the final line, number 34. Again, the range for the various categories of extended care institutions is from a minimum of 117.15 hours to a maximum of 132.5 manhours per bed. Throughout the six-month period this would imply approximately .68 hours per bed day and .71 hours per occupied bed day. These ratios imply approximately 11 patients per staff person.

Kaiser-Permanente

Staff and research members of the Kaiser-Permanente Medical Care System in Portland, Oregon, have published results of some of their analysis in Home Care and Extended Care in a Comprehensive Pre-Payment Plan [3]. Their primary purpose was to investigate the impact of home care and extended care on hospital utilization; however, as part of their study they did identify unit cost for the ECF, which was attached to the Bess Kaiser Hospital. Table B-5 presents a summary of ECF costs for 1968. The total number of patient days in the ECF are shown as well as breakdown for Medicare and non-Medicare patients. The total ECF costs are shown to have been $636,197. The cost per day was determined by dividing the total ECF cost by the total number of ECF days. The cost of person per year was calculated by dividing the cost incurred by each group by the total members of the Kaiser plan who were within that group. The cost per stay should be the product of the average length

EXTENDED CARE INSTITUTIONS

	WITHIN HOSP.	SEPARATE BLDG.	FREE STAND.	PROPRI- ETARY	UNDER 50 BEDS	50 TO 99	100 AND OVER
GROSS PATIENT REVENUE PPD	15.78	18.19	15.09	20.93	17.48	15.26	16.58
TOTAL OPERATING EXPENSE PPD	15.99	19.21	14.17	18.37	18.67	15.27	19.04
PERCENT OF OCCUPANCY	95.00	92.45	97.52	94.91	94.50	96.19	91.43
AVERAGE DAILY CENSUS	32.63	58.86	92.06	106.13	30.66	62.36	80.46
5 SALARIES + FEES / TOTAL OPR. EXP.	66.89	62.68	60.58	55.95	65.48	64.47	62.68
ROUTINE DAILY CHARGE PPD	14.56	16.52	14.83	19.96	15.39	14.83	16.05
DAILY SERVICE - DIRECT COST PPD	7.33	7.48	5.87	6.95	7.76	6.36	7.33
- MANHOURS PPD	3.19	2.96	2.47	2.90	3.32	2.68	2.90
- MH PER BED PER DAY	2.82	2.65	2.40	2.40	2.94	2.56	2.24
-10 RN / TOTAL DAILY SERVICE STAFF	12.46	10.39	11.39	22.59	12.67	10.39	12.46
LPN / TOTAL DAILY SERVICE STAFF	20.14	16.85	12.14	11.38	23.55	14.57	12.97
OTHER NRSG / DAILY SERVICE STAFF	71.74	69.22	75.54	74.12	67.52	75.26	68.62
SPECIAL SERVICES - DIRECT COST PPD	0.87	0.68	0.42	0.86	0.94	0.46	0.89
- DIRECT COST PB	20.37	20.23	10.88	19.48	24.88	12.67	24.50
15 - MANHOURS PB	2.32	2.64	2.57	1.48	3.27	2.94	3.21
DIETARY DIRECT COST PER MEAL	1.15	1.17	0.78	0.81	1.19	1.04	1.12
FOOD AND SUPPLY COST PER MEAL	0.56	0.60	0.44	0.46	0.59	0.49	0.53
MEALS - SERVED PER PATIENT DAY	3.00	3.00	3.21	3.37	2.99	3.00	3.02
- PREPARED PER MANHOUR	3.35	3.76	5.28	5.65	3.30	4.01	4.17
20 LAUNDRY - DIRECT COST PER 100 LBS.	9.99	8.45	9.22	5.09	10.03	9.98	9.52
- POUNDS PER PATIENT DAY	6.52	5.55	5.30	4.12	6.18	5.30	7.88
- POUNDS PER MANHOUR	28.78	35.83	32.07	0.00	28.78	30.64	31.17
LINEN DIRECT COST - PER PATIENT DAY	0.09	0.12	0.09	0.09	0.08	0.09	0.09
- PER BED	2.50	3.11	2.83	2.65	2.59	2.60	2.83
HOUSEKEEPING - DIRECT COST PER BED	21.79	25.52	22.42	22.42	22.94	23.44	22.53
25 - MANHOURS PER BED	9.40	10.97	9.45	9.45	9.89	9.51	9.45
PLANT + MAINTENANCE - DC PER BED	27.42	27.43	31.38	21.55	27.72	28.22	31.38
- MH PER BED	3.78	3.42	3.26	2.21	3.92	3.76	2.55
GENERAL ADMINISTRATION - DC PB	22.36	31.96	39.67	63.96	27.25	33.10	31.96
30 - MH PB	4.07	6.51	5.73	5.93	4.79	5.49	5.06
EMPLOYEE HEALTH + WELFARE DC PB	22.84	22.71	19.41	19.41	26.29	18.82	22.57
DEPRECIATION DIRECT COST PER BED	23.91	24.87	17.08	17.08	30.04	21.56	22.52
TOTAL - SALARIES + FEES DC PB	287.24	293.00	281.45	281.45	294.48	282.59	288.08
34 - MANHOURS PER BED	131.34	127.74	117.15	119.32	132.52	122.92	117.15

Source: [8]

TABLE B-5

SUMMARY OF ECF COSTS: 1968

	Report	Adjusted
ECF days . . . .$	16,279.00	
Medicare	8,120.00	
Non-Medicare	8,159.00	
Total ECF Cost	636,197.00	
Cost per day	39.08	
Cost per person per year, all members .	5.72	
Medicare	37.40	
Non-Medicare	3.10	
Cost per stay, all stays	367.35	$ 386.89
Medicare	445.51	468.96
Non-Medicare	304.82	316.55

Source: [3], p. 90.

of stay times the cost per day. Apparently it is not. We have included Table B-6 which shows the average length of stay for all members as well as for the Medicare and the non-Medicare populations. Using the data included in that table, we have recalculated the cost per stay and included it as an additional column on Table B-5. There are minor discrepancies which we are unable to explain.

The product of the Kaiser ECF can best be identified through the reason for admission and the patient's condition. Table B-7 reports the need on admission by the four categories: observation only, observation and nonphysician therapy, intensive or multiple nonphysician therapy, and other need. Those admitted for observation only composed in excess of 50 percent of all admissions. An additional 27 percent of those admitted were for observation and nonphysician therapy; 18.9 percent were admitted for intensive multiple nonphysician therapy; and the remaining one percent were not specified.

Table B-8 shows the mobility status of those admitted to the ECF from the hospital and of those subsequently discharged from the ECF. Of the total discharges from the hospital to the ECF in excess of 24 percent were either totally bedridden or able to leave the bed only with much aid. An additional 37.3 percent were able to walk, but only with much aid or with restrictions. Thirty-eight point three percent had unrestricted activity. Upon discharge from the ECF in excess of 82 percent of the patients were able to walk alone with restrictions or had completely unrestricted activity. In general the Medicare patients were less mobile, both upon admission to the ECF and upon their discharge. Table B-9 uses the same format as Table B-8, except it shows the activities of daily living requiring help of those admitted to the ECF from the hospital and those discharged from the ECF. The activities included are hairbrushing and combing, bathing, dressing, eating, teethbrushing, and other activities. The table is self-explanatory.

Veterans Administration

The Veterans Administration also provides extended care for its beneficiaries. Generally those requiring care are admitted to the VA Domicilliaries (cost

TABLE B-6

Hospital and ECF Utilization, and Annual Rates per 1000
Population, by Medicare Status; October 1967 to December 1968

Site of Care and Medicare Status	Discharges	Days	Average Stay	Annual Rates per 1000 Population	
				Discharges	Days
All members (*N* = 109,274):					
Hospital	12,091	58,614	4.9	88.5	429
Extended care facility ...	2,147	21,152	9.9	15.7	155
Medicare (*N* = 8,260):					
Hospital	2,304	14,048	6.1	223.1	1,361
Extended care facility ...	945	11,358	12.0	91.5	1,100
Non-Medicare (*N* = 101,014):					
Hospital	9,787	44,566	4.6	77.5	353
Extended care facility ...	1,202	9,794	8.1	9.5	78

Source: [3], p. 57.

Percent Distribution of ECF Discharges, Grouped by
Type of Admission to ECF, by Patient Need on Admission; 1968

| Need on Admission | All Discharges | | Type of Admission | | | |
| | | | Transfer from Hospital | | Direct to ECF | |
	No.	%	No.	%	No.	%
All categories	1,730	100.0	1,536	100.0	194	100.0
Observation only	919	53.1	846	55.1	73	37.7
Observation and nonphysician therapy	467	27.0	410	26.7	57	29.4
Intensive or multiple nonphysician therapy ..	327	18.9	267	17.4	60	30.9
Other need	17	1.0	13	0.8	4	2.0

Source: [3], p. 76.

TABLE B-8

Percent Distribution of Hospital Discharges to ECF, and of Subsequent
ECF Discharges, by Mobility Status and by Medicare Status; 1968

| Mobility Status | All Discharges | | Medicare | | Non-Medicare | |
	Hospital Discharges to ECF	Subsequent ECF Discharges	Hospital Discharges to ECF	Subsequent ECF Discharges	Hospital Discharges to ECF	Subsequent ECF Discharges
All categories..	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Totally bed-ridden	10.4	2.2	8.7	2.7	12.1	1.7
Able to leave bed only with much aid ..	14.0	8.6	18.5	11.4	9.7	6.0
Able to leave bed easily and walk with much aid ..	9.1	7.0	12.7	9.1	5.5	5.0
Able to leave bed and walk alone with re-strictions ..	28.2	24.5	25.6	25.7	30.8	23.4
Unrestricted activity	38.3	57.7	34.5	51.1	41.9	63.9
(Total known N)	(1,546)	(1,460*)	(751)	(704*)	(795)	(756*)

* A number of 1968 ECF admissions were not discharged until 1969.

Source: [3], p. 78.

TABLE B-9

Percent of Hospital Discharges to ECF, and of Subsequent ECF Discharges, by Specified Activities of Daily Living in Which Help Was Required at Discharge, and by Medicare Status; 1968

Activities of Daily Living Requiring Help	All Discharges				Medicare				Non-Medicare			
	Hospital Discharges to ECF		Subsequent ECF Discharges		Hospital Discharges to ECF		Subsequent ECF Discharges		Hospital Discharges to ECF		Subsequent ECF Discharges	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hair brushing or combing .	170	11.0	83	5.3	112	14.9	63	8.3	58	7.3	20	2.5
Bathing	586	37.9	176	11.3	350	46.5	120	15.8	236	29.7	56	7.0
Dressing	307	19.8	163	10.4	204	27.1	109	14.3	103	13.0	54	6.7
Eating	168	10.9	84	5.4	113	15.0	62	8.2	55	6.9	22	2.7
Teeth brushing	181	11.7	79	5.0	121	16.1	58	7.6	60	7.5	21	2.6
Other activities	71	4.6	44	2.8	36	4.8	34	4.5	35	4.4	10	1.2
(Total known N)	(1,547)		(1,562)		(752)		(760)		(795)		(802)	

Source: [3], p. 78.

per diem $12.56), VA nursing bed care (cost per diem $31.00), and community nursing homes (cost per diem $16.93). We contacted Takashiki Miyamoto, Chief of Bed Services, Division of the Extended Care Service, to identify the type of care rendered in each facility. Below we will quote liberally from his written reply to our questions.

There are 18 domicilliaries that can provide care for eligible ambulatory veterans. As was reported above, the average cost per diem is $12.56. Table B-10 lists the domicilliaries, their operating beds and occupancy, and the patient cost per diem. As the average monthly turnover is only 8.6 percent of the patients, the average length of stay is almost one year. Miyamoto informed us: "Comprehensive, professional care is provided to fulfill the three-fold mission of the domicilliary within the programs of: preventive medicine, public health, and rehabilitative measures for veterans who require continued care in a protective environment; special behavioral and medical rehabilitation on a temporary basis for those who require intermittent shor-term services; restoration for those who can be helped sufficiently to enable them to return to the community, usually within a year. The veteran must be able to perform all of the following as one of the requirements for the domicilliary admission:

1. Perform without assistance such activities of daily living as brushing teeth; bathing; combing hair; body eliminations.
2. Dress himself with a minimum of assistance.
3. Proceed to and return from the dining hall without aid.
4. Feed himself.
5. Secure medical attention on an ambulatory basis or by the use of a personally propelled wheelchair.
6. Have a voluntary control over body eliminations or control by the use of appropriate prosthesis.
7. Share by his personal efforts in some measure, however slight, in the maintenance and operation of the station.
8. Make rational and competent decisions as to his desire to remain or leave the station."

TABLE B-10

Line No.	VA hospitals and domiciliaries	Operating beds, Mar. 31, 1973	Percent bed occupancy, March 1973[14]	Average daily patient census[3]		Applications for admissions received July 1, 1972–Mar. 31, 1973		Waiting list, Mar. 31, 1973	Admissions, July 1, 1972–Mar. 31, 1973[5]	Discharges, July 1, 1972–Mar. 31, 1973[5]	Average monthly turnover rate, July 1, 1972–Mar. 31, 1973[5]	Patients treated, July 1, 1972–Mar. 31, 1973[5]	Cost per diem, July 1, 1972–Mar. 31, 1973	Line No.
				March 1973	July 1, 1972—Mar. 31, 1973	Total	Percent eligible							
	VA DOMICILIARIES								VA DOMICILIARIES					
1	TOTAL	11,130	92.6	10,309	10,324	8,848	84	363	7,610	7,981	8.6	19,343	$12.56	1
2	Bath, N.Y	660	97.7	645	639	296	78	88	229	377	6.6	1,066	15.60	2
3	Bay Pines, Fla	322	97.5	314	313	326	67	145	155	173	6.1	520	17.58	3
4	Biloxi, Miss	723	97.6	706	701	1,276	94	21	852	865	13.7	1,633	9.74	4
5	Bonham, Tex	230	97.4	224	240	172	71	2	142	211	9.8	478	13.32	5
6	Dayton, Ohio	1,070	91.1	975	1,031	543	79	1	477	763	8.2	1,829	12.86	6
7	Dublin, Ga	421	98.8	416	413	528	86	10	386	426	11.5	886	11.69	7
8	Hampton, Va	750	96.1	721	717	826	93	14	299	369	5.7	1,148	10.15	8
9	Hot Springs, S. Dak	550	92.9	511	515	104	100	--------	218	287	6.2	874	10.89	9
10	Leavenworth, Kans.[a]	975	84.5	824	815	751	94	--------	1,083	1,022	13.9	1,945	10.66	10
11	Los Angeles, Calif	550	93.5	514	488	366	86	--------	761	211	4.8	759	21.71	11
12	Martinsburg, W. Va	550	97.3	535	532	230	65	22	220	215	4.5	782	12.91	12
13	Mountain Home, Tenn	1,280	86.0	1,101	1,122	1,176	70	--------	953	1,100	10.9	2,333	9.55	13
14	Prescott, Ariz	232	94.4	219	229	234	64	16	157	187	9.1	460	12.89	14
15	Temple, Tex	552	89.1	492	500	283	79	3	427	399	8.9	925	10.55	15
16	Tucson, Ariz	80	83.8	67	69	52	73	12	40	45	7.2	121	16.59	16
17	Vancouver, Wash	110	90.0	99	93	182	96	14	121	114	13.6	224	20.57	17
18	White City, Oreg	1,165	98.6	1,149	1,122	778	92	15	739	783	7.8	2,071	10.78	18
19	Wood, Wis	910	87.7	798	785	897	82	--------	438	491	6.9	1,346	13.19	19

Source: [9], pp. 18-19.

The VA nursing bed units are extended care facilities that are attached to Veterans Administration hospitals.   Eighty-one have been listed in Table B-11. Also reported there are the operating beds, the percent of occupancy, and the cost per diem. The average monthly turnover is only 4.1 percent, or less than half that of the domicilliaries, implying average length of stay of approximately two years. On average, the cost per diem is $31.00. "The Veterans Administration nursing home care program is designed to care for the veteran who requires skilled nursing care, related medical and individual adjustment services, and support of personal care for an extended period of time in a home-like setting. The veteran admitted to the program is chronically ill, has a permanent or residual disability, is expected to require a long period of nursing supervision, observation, and care, and requires special effort of long-term rehabilitative nature. All the resources of the hospital in which the nursing home care unit is situated are available and utilized to support the program. The residents range over a continuum of levels of ambulation, type and degree of disability, and competence. The care and services provided are determined on the basis of the individual's changing needs." Patients admitted to these ECF's are generally unacceptable to the community nursing home care program, due to the statutory maximum which the Veterans Administration can pay the community nursing home, or because the anticipated duration of service is longer than six months.

The Veterans Administration also has contracts with community skilled nursing homes. The average cost per day is $16.93. Table B-12 lists the cities in which this program is available, as well as the average daily patient census and the cost per diem in each city. The aggregate average monthly turnover is 21.1 percent, implying the average length of stay is less than five months. "Candidates for this program are VA hospitalized veterans requiring skilled nursing home care for convalescense, rehabilitation, or continued care for a protracted period of time (interpreted to mean a minimum of one month). Those who require more than occasional visits by physicians or more than minimal laboratory, x-ray, and other services

are not placed in this program" These reported charges not only include
the base rate, but also all special services which are provided to the
patients.

TABLE B-11
VA Nursing Bed Care

VA NURSING BED CARE

VA hospitals and domiciliaries	Operating beds, Mar. 31, 1973	Percent bed occupancy, March 1973	Average daily patient census, March 1973	Average daily patient census, July 1, 1972–Mar. 31, 1973	Admissions, July 1, 1972–Mar. 31, 1973	Discharges, July 1, 1972–Mar. 31, 1973	Average monthly turnover rate, July 1, 1972–Mar. 31, 1973	Patients treated, July 1, 1972–Mar. 31, 1973	Cost per diem, July 1, 1972–Mar. 31, 1973
TOTAL	6,555	94.0	6,163	6,045	3,079	2,222	4.1	8,631	$31.00
Albany, N.Y.	100	94.0	94	85	83	45	5.9	142	30.65
Albuquerque, N. Mex.	47	93.6	44	44	107	94	23.7	139	32.72
Alexandria, La.	95	95.8	91	90	32	31	3.8	126	30.36
Allen Park, Mich.	72	93.1	67	67	16	16	2.7	88	28.53
Altoona, Pa. [17]	20	100.0	20	19	51	30	17.5	50	37.64
American Lake, Wash.	76	100.0	76	74	29	29	4.4	105	24.81
Augusta, Ga.	40	100.0	40	38	7	4	1.2	44	26.92
Bath, N.Y.	180	95.0	171	171	229	92	6.0	269	20.40
Battle Creek, Mich.	180	94.4	170	171	44	47	3.1	227	31.96
Beckley, W. Va.	42	100.0	42	40	18	18	5.0	60	33.90
Bedford, Mass.	162	96.9	157	157	28	24	1.7	185	30.06
Big Springs, Tex.	25	120.0	30	26	18	11	4.7	41	49.27
Biloxi, Miss.	71	91.5	65	68	3	7	1.1	74	28.20
Bonham, Tex.	100	61.0	61	60	5	5	.9	68	36.52
Brecksville, Ohio	100	99.0	99	98	29	29	3.3	129	29.96
Brockton, Mass.	100	97.0	97	96	26	26	3.0	125	23.60
Buffalo, N.Y.	36	100.0	36	36	16	19	5.9	55	29.32
Butler, Pa.	104	89.4	93	84	69	35	4.6	135	35.22
Canandaigua, N.Y.	100	99.0	99	94	39	21	2.5	123	29.39
Castle Point, N.Y.	96	90.6	87	86	28	23	3.0	118	40.64
Cheyenne, Wyo.	47	95.7	45	45	22	19	4.7	66	38.62
Chillicothe, Ohio	99	98.0	97	97	24	22	2.5	122	25.04
Cincinnati, Ohio	205	95.1	195	199	66	76	4.2	278	29.24
Coatesville, Pa.	50	100.0	50	50	11	11	2.4	61	18.66
Columbia, Md. [2]	54	42.6	23	9	43	15	18.5	43	([24])
Columbia, S.C.	72	93.1	67	68	51	55	9.0	123	33.21
Danville, Ill.	120	97.5	117	113	38	35	3.4	156	25.65
Dayton, Ohio	220	67.4	155	141	151	63	5.0	237	32.45
Downey, Ill.	190	89.5	170	171	69	35	2.3	215	24.75
Dublin, Ga.	86	95.3	82	80	53	22	3.1	108	29.76
East Orange, N.J. [17]	40	82.5	33	35	82	49	15.6	82	44.35
Erie, Pa.	40	100.0	40	39	12	12	3.4	52	26.19
Fargo, N. Dak.	50	96.0	48	48	27	26	6.0	79	33.73
Fayetteville, N.C.	39	100.0	39	38	12	12	3.5	51	32.48
Fort Howard, Md.	47	89.4	42	45	16	17	4.2	64	43.83
Fort Lyon	37	89.2	33	35	23	25	7.9	60	28.32
Fort Wayne, Ind.	40	97.5	39	38	7	8	2.3	47	26.17
Grand Island, Nebr.	42	97.6	41	41	13	12	3.3	53	40.06
Grand Junction, Colo.	42	97.6	41	41	12	15	4.1	56	35.54
Hampton, Va.	41	97.6	40	39	4	7	2.0	47	32.02

VA NURSING BED CARE—Continued

VA hospitals and domiciliaries	Operating beds, Mar. 31, 1973	Percent bed occupancy, March 1973	Average daily patient census, March 1973	Average daily patient census, July 1, 1972–Mar. 31, 1973	Admissions, July 1, 1972–Mar. 31, 1973	Discharges, July 1, 1972–Mar. 31, 1973	Average monthly turnover rate, July 1, 1972–Mar. 31, 1973	Patients treated, July 1, 1972–Mar. 31, 1973	Cost per diem, July 1, 1972–Mar. 31, 1973
Houston, Tex.	78	97.4	76	75	32	30	4.4	110	$32.51
Indianapolis, Ind.	46	100.0	46	45	65	60	14.8	110	35.59
Kerrville, Tex.	36	100.0	36	36	10	9	2.8	44	31.15
Knoxville, Iowa	200	97.0	194	194	34	32	1.8	233	30.21
Leavenworth, Kans.	45	100.0	45	44	13	14	3.5	59	28.46
Lebanon, Pa.	97	100.0	97	97	39	26	3.0	123	26.51
Lexington, Ky.	101	97.0	98	96	114	105	12.2	204	33.83
Little Rock, Ark.	150	98.0	147	145	56	37	2.8	200	34.35
Lyons, N.J.	50	90.0	45	45	24	18	4.4	64	33.01
Manchester, N.H.	38	100.0	38	38	29	29	8.5	69	35.85
Marion, Ind.	69	94.2	65	67	21	24	4.0	93	26.09
Miami, Fla.	90	92.2	83	84	129	128	16.9	217	39.70
Miles City, Mont. [17]	20	90.0	18	15	30	10	7.4	30	46.07
Montrose, N.Y.	64	93.8	60	53	47	30	6.3	91	26.60
Mountain Home, Tenn.	58	100.0	58	57	17	13	2.5	71	28.82
Murfreesboro, Tenn.	48	95.8	46	46	10	10	2.4	58	29.46
Northampton, Mass. [17]	50	98.0	49	44	63	14	3.5	64	([24])
Oteen, N.C.	47	97.9	46	46	7	6	1.4	54	31.07
Palo Alto, Calif.	150	96.7	145	147	18	20	1.5	165	30.36
Perry Point, Md.	50	102.0	51	50	19	10	2.2	65	28.59
Pittsburgh, Pa. (Gen.)	208	97.1	202	200	54	62	3.4	271	33.36
Poplar Bluff, Mo.	49	95.9	47	48	10	9	2.1	58	26.39
Reno, Nev.	22	100.0	22	21	3	3	1.6	25	47.02
Roseburg, Oreg.	77	100.0	77	61	43	11	2.0	88	33.86
Salem, Va.	100	91.0	91	96	27	30	3.5	126	28.80
Salisbury, N.C.	93	95.7	89	90	18	17	2.1	108	25.52
Salt Lake City, Utah	46	95.7	44	42	63	58	15.3	107	44.62
San Diego, Calif.	60	86.7	52	51	61	53	11.5	109	49.60
Sepulveda, Calif.	80	97.5	78	77	70	77	11.1	158	33.84
Sioux Falls, S. Dak.	75	97.3	73	72	16	11	1.7	85	34.79
St. Cloud, Minn.	44	97.7	43	43	6	7	1.8	50	26.09
St. Louis, Mo.	93	89.2	83	84	18	17	2.2	103	36.12
Syracuse, N.Y. [17]	40	87.5	35	32	56	19	6.6	58	35.40
Togus, Maine	60	98.3	59	59	15	16	3.0	76	24.18
Tomah, Wis.	100	96.0	96	97	15	16	1.8	113	24.18
Topeka, Kans.	79	96.2	76	75	23	26	3.9	107	25.09
Tucson, Ariz.	41	95.1	39	40	22	19	5.3	60	39.40
Tuskegee, Ala.	120	95.0	114	109	46	31	3.2	152	22.20
Waco, Tex.	84	97.6	82	82	16	5	.7	90	25.86
West Haven, Conn.	90	96.7	87	69	60	12	1.9	103	37.16
Wood, Wis.	200	98.5	197	196	108	39	2.2	240	28.46

See footnotes at end of table.

Source: [9], pp. 20-21

TABLE B-12
VA Community Nursing Home Care

COMMUNITY NURSING HOME CARE

VA clinic of jurisdiction	Average daily patient census, March 1973	Average daily patient census, July 1, 1972–Mar. 31, 1973	Admissions, July 1, 1972–Mar. 31, 1973	Discharges July 1, 1972–Mar. 31, 1973	Average monthly turnover rate, July 1, 1972–Mar. 31, 1973	Patients treated, July 1, 1972–Mar. 31, 1973	Cost per diem, July 1, 1972–Mar. 31, 1973
TOTAL	4,632	4,601	8,975	8,726	21.1	13,459	$16.93
Albany, N.Y.	9	6	11	7	13.0	15	17.25
Albuquerque, N. Mex.	34	43	61	77	19.9	107	14.68
Alexandria, La.	5	4	10	6	16.7	11	13.52
Allen Park, Mich.	17	19	33	34	19.9	52	18.57
Altoona, Pa.	5	6	10	6	11.1	10	18.50
Amarillo, Tex.	7	8	28	25	34.7	33	14.78
American Lake, Wash.	6	6	2	2	3.7	8	16.22
Ann Arbor, Mich.	9	8	26	19	26.4	30	18.17
Atlanta, Ga.	40	40	100	103	28.6	142	17.36
Augusta, Ga.	78	76	52	40	5.8	118	16.98
Baltimore, Md.	15	19	67	73	42.7	84	18.80
Batavia, N.Y.	2	----	2	----	----	2	(24)
Bath, N.Y.	3	4	12	8	22.2	12	18.22
Battle Creek, Mich.	2	2	----	----	----	2	16.84
Bay Pines, Fla.	147	155	278	283	20.3	432	16.66
Beckley, W. Va.	2	4	10	13	36.1	15	17.07
Bedford, Mass.	40	45	29	34	8.4	74	16.45
Big Spring, Tex.	15	11	17	7	7.1	23	15.33
Biloxi, Miss.	19	19	50	52	30.4	69	14.55
Birmingham, Ala.	20	20	61	58	32.2	78	14.53
Boise, Idaho	11	10	28	21	23.3	35	14.56
Bonham, Tex.	18	13	38	21	17.9	39	14.83
Boston, Mass.	49	67	106	132	21.9	175	18.48
Brecksville, Ohio	8	7	13	10	15.9	18	17.40
Brockton, Mass.	11	12	15	15	13.9	27	15.40
Bronx, N.Y.	8	7	18	16	25.4	25	19.27
Brooklyn, N.Y.	4	4	11	11	30.6	15	18.76
Buffalo, N.Y.	19	15	25	22	16.3	41	18.62
Butler, Pa.	5	5	10	10	22.2	14	15.77
Canandaigua, N.Y.	1	1	----	----	----	1	17.70
Castle Point, N.Y.	6	5	11	9	20.0	15	17.22
Charleston, S.C.	16	15	39	39	28.9	53	17.13
Cheyenne, Wyo.	5	3	13	11	40.7	16	15.28
Chicago, Ill. (West Side)	69	63	135	115	20.3	189	18.74
Chicago, Ill. (Research)	54	50	114	123	27.3	165	18.40
Chillicothe, Ohio	98	95	97	97	11.3	190	16.59
Cincinnati, Ohio	44	44	101	86	21.7	140	19.60
Clarksburg, W. Va.	6	6	25	23	42.6	31	17.59
Cleveland, Ohio	67	66	135	116	19.5	187	17.26
Coatesville, Pa.	119	116	31	26	2.5	145	17.29
Columbia, Mo.	5	4	11	6	16.7	11	16.92
Columbia, S.C.	20	15	34	22	16.3	40	17.87
Dallas, Tex.	65	67	168	173	28.7	240	15.48
Danville, Ill.	13	16	30	36	25.0	49	17.21
Dayton, Ohio	29	29	61	62	23.8	92	16.28

COMMUNITY NURSING HOME CARE—Continued

VA clinic of jurisdiction	Average daily patient census, March 1973	Average daily patient census, July 1, 1972–Mar. 31, 1973	Admissions, July 1, 1972–Mar. 31, 1973	Discharges July 1, 1972–Mar. 31, 1973	Average monthly turnover rate, July 1, 1972–Mar. 31, 1973	Patients treated, July 1, 1972–Mar. 31, 1973	Cost per diem, July 1, 1972–Mar. 31, 1973
Denver, Colo.	36	35	56	72	22.9	109	$16.62
Des Moines, Iowa	27	27	64	62	25.5	88	16.89
Downey, Ill.	47	44	42	43	10.9	91	18.11
Dublin, Ga.	7	7	14	12	19.0	19	15.40
Durham, N.C.	22	20	43	43	21.5	67	18.25
East Orange, N.J.	43	43	70	56	14.5	98	19.44
Erie, Pa.	5	9	17	13	16.0	21	17.18
Fargo, N. Dak.	24	21	43	40	21.2	66	16.21
Fayetteville, Ark.	12	8	29	22	30.6	36	12.73
Fayetteville, N.C.	13	10	28	22	24.4	36	14.94
Fort Harrison, Mont.	16	14	18	19	15.1	35	17.17
Fort Howard, Md.	12	9	22	16	19.8	29	19.20
Fort Lyon, Colo.	24	18	20	6	3.7	30	15.49
Fort Meade, S. Dak.	9	9	17	12	14.8	20	15.70
Fort Wayne, Ind.	11	13	17	21	17.9	32	18.05
Fresno, Calif.	10	11	24	27	27.3	36	15.98
Gainesville, Fla.	42	36	80	83	25.6	125	16.96
Grand Island, Nebr.	2	3	6	6	22.2	8	14.93
Grand Junction, Colo.	9	9	21	22	27.2	32	15.78
Hampton, Va.	13	15	31	42	31.1	54	17.92
Hines, Ill.	113	116	274	231	22.1	347	18.49
Honolulu, Hawaii	5	5	15	9	20.0	13	22.38
Hot Springs, S. Dak.	8	3	7	8	29.6	10	14.73
Houston, Tex.	77	70	182	182	28.9	263	16.15
Huntington, W. Va.	35	23	72	49	23.7	89	17.12
Indianapolis, Ind.	30	31	74	72	25.8	101	18.88
Iowa City, Iowa	38	35	103	102	32.4	137	17.24
Iron Mountain, Mich.	6	5	10	9	20.0	15	17.54
Jackson, Miss.	22	20	42	65	36.1	84	14.49
Juneau, Alaska	7	6	25	23	42.6	29	22.83
Kansas City, Mo.	35	37	93	96	28.8	132	16.84
Kerrville, Tex.	34	27	45	40	16.5	73	16.47
Knoxville, Iowa	2	2	----	----	----	2	19.38
Lake City, Fla.	13	14	31	24	19.0	36	15.18
Leavenworth, Kans.	34	30	66	54	20.0	93	15.67
Lebanon, Pa.	27	26	22	19	8.1	48	17.97
Lexington Ky.	28	31	57	70	25.1	99	16.17
Lincoln, Nebr.	9	8	8	5	6.9	14	17.13
Little Rock, Ark.	68	60	74	77	14.3	147	13.38
Livermore, Calif.	23	28	25	36	14.3	61	16.71
Long Beach, Calif.	139	168	320	334	22.1	477	17.47
Los Angeles, Calif. (Brent)	49	52	55	75	16.0	122	18.27
Los Angeles, Calif. (WAD)	83	98	136	280	31.7	359	19.12
Louisville, Ky.	44	41	116	107	29.0	152	15.64
Lyons, N.J.	2	3	1	2	7.4	4	19.48

See footnotes at end of table.

Source: [9], pp. 22-25.

COMMUNITY NURSING HOME CARE—Continued

VA clinic of jurisdiction	Average daily patient census [a]		Admissions, July 1, 1972–Mar. 31, 1973	Discharges, July 1, 1972–Mar. 31, 1973	Average monthly turnover rate, July 1, 1972–Mar. 31, 1973	Patients treated, July 1, 1972–Mar. 31, 1973	Cost per diem, July 1, 1971–Mar. 31, 1973 [b]
	March 1973	July 1, 1972–Mar. 31, 1973					
Madison, Wis.	21	21	49	42	22.2	64	17.83
Manchester, N.H.	30	21	62	50	26.5	81	17.53
Marion, Ill.	54	51	128	125	27.2	181	15.91
Marion, Ind.	9	6	10	6	11.1	16	18.40
Marlin, Tex.	10	9	22	20	24.7	31	15.36
Martinez, Calif.	10	9	22	26	32.1	36	15.24
Martinsburg, W. Va.	23	22	51	41	20.7	66	17.94
Memphis, Tenn.	20	22	61	48	24.2	76	15.46
Miami, Fla.	67	63	182	161	28.4	232	16.94
Miles City, Mont.	7	5	11	10	22.2	17	7.24
Minneapolis, Minn.	97	105	206	227	24.0	327	16.35
Montgomery, Ala.	2	4	14	18	50.0	21	16.45
Montrose, N.Y.	2	4	2	3	8.3	6	18.69
Mountain Home, Tenn.	81	85	128	138	18.0	214	16.33
Murfreesboro, Tenn.	3	4	5	5	13.9	7	17.59
Muskogee, Okla.	40	34	95	87	28.4	128	11.95
Nashville, Tenn.	49	46	141	125	30.2	179	18.34
Newington, Conn.	31	25	78	62	27.6	98	19.44
New Orleans, La.	39	38	98	87	25.4	124	15.00
New York, N.Y.	1	2	1	2	11.1	3	18.26
Northampton, Mass.	51	56	31	38	7.5	93	15.17
Northport, N.Y.	4	3	3	2	7.4	6	19.46
Oklahoma City, Okla.	42	39	143	122	34.8	173	12.31
Omaha, Nebr.	26	23	75	79	38.2	108	16.27
Oteen, N.C.	20	19	25	26	15.2	44	16.17
Palo Alto, Calif.	17	17	23	18	11.8	35	16.06
Perry Point, Md.	20	21	15	14	7.4	36	18.76
Philadelphia, Pa.	75	84	194	186	24.6	260	19.41
Phoenix, Ariz.	67	62	130	104	18.6	175	16.41
Pittsburgh, Pa. (psychiatric)	18	16	12	3	2.1	23	16.86
Pittsburgh, Pa. (general)	16	15	27	25	18.5	42	16.73
Poplar Bluff, Mo.	14	13	38	38	32.5	49	14.78
Portland, Oreg.	55	44	134	92	23.2	152	15.04
Prescott, Ariz.	10	9	13	12	14.8	23	16.48
Providence, R.I.	35	31	74	71	25.4	108	18.50

See footnotes at end of table.

## COMMUNITY NURSING HOME CARE—Continued

VA clinic of jurisdiction	Average daily patient census [a]		Admissions, July 1, 1972–Mar. 31, 1973	Discharges, July 1, 1972–Mar. 31, 1973	Average monthly turnover rate, July 1, 1972–Mar. 31, 1973	Patients treated, July 1, 1972–Mar. 31, 1973	Cost per diem, July 1, 1972–Mar. 31, 1973 [b]
	March 1973	July 1, 1972–Mar. 31, 1973					
Reno, Nev.	2	1	3	1	11.1	3	17.90
Richmond, Va.	32	23	63	47	22.7	79	18.60
Roseburg, Oreg.	9	12	21	20	18.5	29	14.25
Saginaw, Mich.	2	2	4	5	27.8	7	16.85
Salem, Va.	53	58	65	71	13.6	121	18.04
Salisbury, N.C.	12	15	18	22	16.3	31	19.19
Salt Lake City, Utah	7	7	11	9	14.3	18	14.79
San Diego, Calif.	37	62	87	122	21.9	157	18.08
San Francisco, Calif.	31	28	92	91	36.1	124	16.92
San Juan, P.R.	20	20	52	50	27.8	73	15.54
Seattle, Wash.	67	63	202	187	33.0	260	17.26
Sepulveda, Calif.	72	88	120	149	18.8	222	17.70
Sheridan, Wyo.	31	37	17	31	9.3	59	15.18
Shreveport, La.	36	33	102	82	27.6	117	14.25
Sioux Falls, S. Dak.	14	10	42	33	36.7	52	16.25
Spokane, Wash.	10	16	37	49	34.0	61	16.00
St. Cloud, Minn.	34	26	34	18	7.7	52	15.25
St. Louis, Mo.	41	51	77	88	19.2	128	16.43
Syracuse, N.Y.	6	4	7	3	8.3	10	18.72
Tampa, Fla.	19	8	43	19	26.4	41	17.86
Temple, Tex.	45	53	87	93	19.5	137	15.47
Togus, Maine	26	25	53	46	20.4	73	18.10
Tomah, Wis.	4	5	4	3	6.7	7	18.26
Topeka, Kans.	28	28	29	31	12.3	61	14.91
Tucson, Ariz.	36	30	75	68	25.2	109	18.00
Tuscaloosa, Ala.	9	9	12	12	14.8	20	14.82
Tuskegee, Ala.	5	7	10	10	15.9	15	14.73
Vancouver, Wash.	21	21	42	42	22.2	64	15.64
Waco, Tex.	36	37	49	65	19.5	97	15.54
Walla Walla, Wash.	5	5	20	22	48.9	28	15.27
Washington, D.C.	74	72	138	118	18.2	196	19.31
West Haven, Conn.	20	16	37	30	20.8	50	16.53
West Roxbury, Mass.	3	5	10	15	33.3	18	17.61
White River Junction, Vt.	2	2	7	6	33.3	9	17.03
Wichita, Kans.	9	7	5	4	6.3	13	18.00
Wilkes-Barre, Pa.	26	23	49	42	20.3	73	17.81
Wilmington, Del.	60	52	124	75	16.0	138	17.66
Wood, Wis.	89	81	181	177	24.3	264	18.26

See footnotes at end of table.

Source: [9], pp. 22-25.

SOURCES APPENDIX B

[1] Federal Requirements, Standards for Payment, Skilled Nursing Home Care, Department of Social and Health Services, Olympia, Washington, April, 1972.

[2] HAS Guide for Uniform Reporting Extended and Nursing Care Institutions, Hospital Administrative Services, American Hospital Association, Chicago, Illinois.

[3] Hurtado, Arnold V.; Greenlick, Merwyn R.; and Saward, Ernest W., Home Care and Extended Care in a Comprehensive Prepayment Plan, Hospital Research and Education Trust, Chicago, Illinois, 1972.

[4] Medical Care Costs and Prices: Background Book, HEW, Social Security Administration, Office of Research and Statistics, Stock No. 1770-0192, January, 1972.

[5] Miyamoto, Takashi, K. (Chief, Bed Services Division, Extended Care Services, Veterans Administration), personal correspondence, July, 1973.

[6] Rules and Regulations Governing Nursing Homes, Department of Social and Health Services, Olympia, Washington, February, 1973.

[7] Skinner, Douglas and Yett, Donald, Estimates of Costs, Revenue, Profits, Manpower Utilization, and Patient Dependency in Skilled Nursing Homes, Department of Health, Education and Welfare, Contract No. HEW-OS-72-194.

[8] Six Month National Comparison for Period Ending December 31, 1972, Hospital Administrative Services, American Hospital Association, Chicago, Illinois.

[9] Veterans Administration Summary of Medical Programs--Preliminary, Committee on Veteran's Affairs, House of Representatives, March, 1973
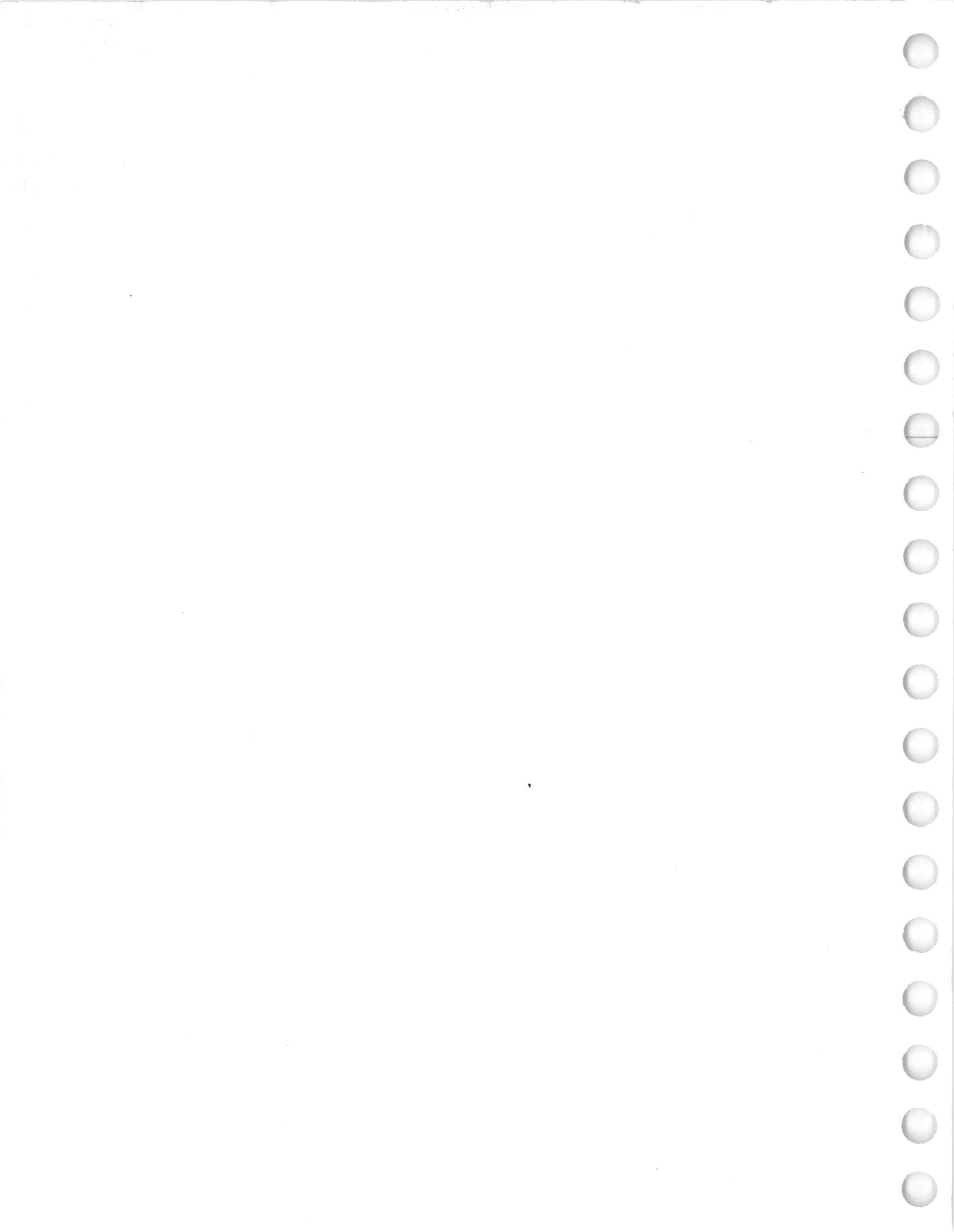
APPENDIX C: THEORETICAL IMPLICATIONS OF CO-INSURANCE

The Navy now supplies its beneficiary population with two primary sources
of care. The first is the care that it provides in military facilities.
The cost to the patient is approximately zero for these services. The
alternative source is through the CHAMPUS program. Briefly, inpatient
care is subject to a co-insurance provision which varies from $1.75 per
day for active duty dependents to 25 percent of the total charge for retired
personnel and their dependents. Outpatient care is subject to both a de-
ductible of $50 per patient or $100 per family and a co-insurance provision
requiring that active duty dependents pay 20 percent and retired personnel
and their dependents pay 25 percent of the charges in excess of the de-
ductible.

The provision of this medical care can be regarded as insurance. Its
purpose if manyfold: it can be analyzed as a method of payment, as both
a recruiting and retention device; it is the form in which an officer or
an enlisted man takes a portion of his income. However, economic theory
has established the fact that subsidies in kind, such as this insurance
program, are generally less efficient than equivalent cash payments.
Hence these payments in kind must have a further purpose than just that of
a method of reimbursement. This purpose is, of course, that the policy
makers have decided to guarantee that the capabilities of the fighting
force should not be impaired due to a low level of health. They have
decided that the officers and enlisted personnel might not "consume"
enough health care should the insurance program be left to their option.
Provision of this same medical care to the dependents is a morale booster--
a part of the "we take of our own" pride -- and allows the government to
minimize the morale problems associated with sick dependents and mounting
medical bills. In short, the government has assumed the responsibility
from its employees to decide what is adequate care.

Insurance in general has an additional effect in that it spreads the risk associated with the uncertainty of the future. Acting as individuals and as groups in the civilian sector, consumers have been willing to pay greater than the expected value of the cost of future medical care (as required to cover both administrative costs and profits of the insurance companies) to reduce this risk factor. Kenneth Arrow, than a professor of economics at Stanford University, recognized this benefit in his article in the American Economic Review (AER) [2]. This example, as well as others in which civilians purchase insurance, clearly indicates that they are risk averters, i.e., that they are willing to make some payment today to reduce the financial implications of future uncertainties.

However, insurance also has another impact; it reduces the price of the contingency insured against. This "morale hazard," as it is referred to in the insurance literature, was explicitly recognized for medical care by Mark Pauley, then an assistant professor of economics at Northwestern University, in the following comment in the AER [19]: "the effect of insurance which indemnifies against all medical care expenses is to reduce the price charged to the individual at the point of service from the market price to zero." The implication is, of course, that unless the demand for medical care is perfectly inelastic, the quantity of medical care demanded will increase. This analysis is well accepted in the community of professional economists and has been explicitly amplified by, among others, Kenneth Arrow [2], Victor Fuchs [8], Martin Feldstein [7], and Joseph Newhouse and Vincent Taylor [17, 18]. Certainly this factor is in part responsible for the widespread inclusion by insurance companies of both co-insurance or co-payment provisions and deductibles. The Kaiser-Permanente plan also requires a co-payment of its members [22], although some other HMO's do not.

Not only does insurance increase the demand for medical care in general, it also encourages what has been referred to as "cadillac medicine". This, of course, is a result of the fact that the marginal cost associated with using the most highly trained and expensive experts in the field is reduced
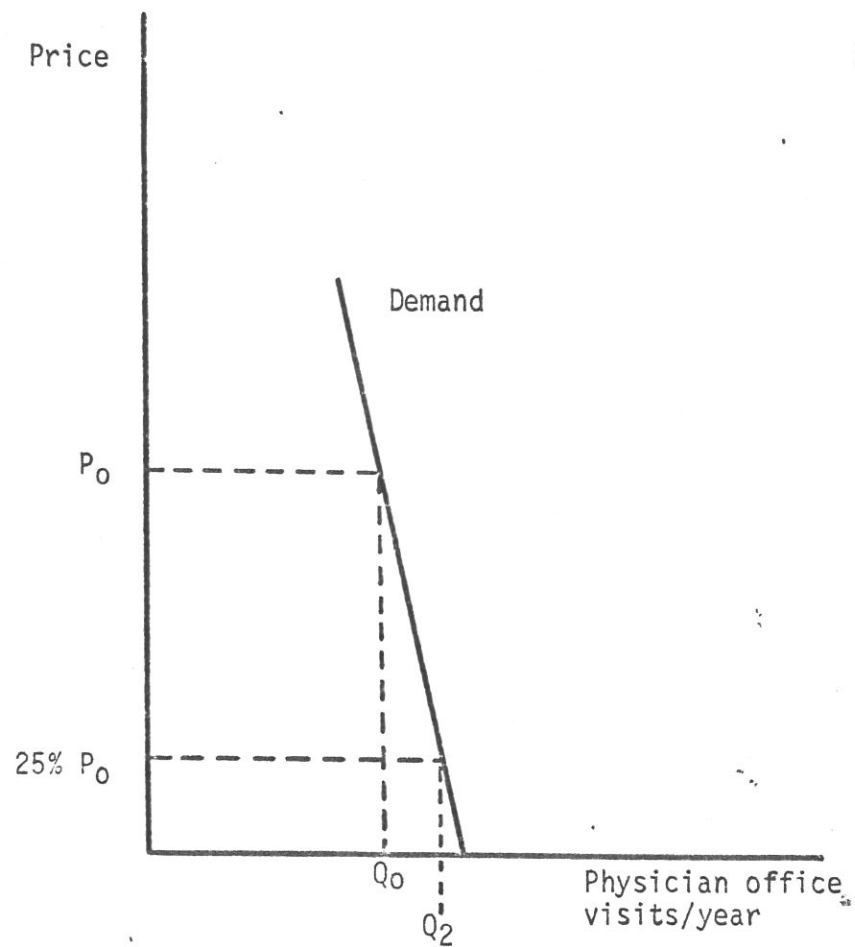
to virtually zero. In short, the consumer is no longer cost conscious, or, as Newhouse and Taylor [18] state it: "the consumer is an effective force in the market place because in general he spends his dollar where he gets the most value for his money." Insurance tends to reduce the incentives for the consumer to provide this control.

Some may object that the above analysis is irrelevant as health care should be provided as a right to every individual. It would be convenient if we could do so and in unlimited quantities. However, with the current resources available, this is impossible. As such medical care must be rationed. One of the functions of price is to perform this rationing. Other methods are available but are generally less efficient and more costly. The present difficulties with establishing economic controls by the Nixon administration should be warning enough as to the problems that lie therein. Currently, the Navy medical system allows the queue, or the waiting line, to ration these resources. People demanding care often wait for up to three hours to see a physician, or spend an entire day waiting in various lines and sometimes are still not satisfied.

Another criticism of the use of price rationing, or charging for a resource or a service is that it implies discrimination against those with less income. This occurs every day in the purchase of cars, houses, food, clothing ---virtually every market transaction. However, somehow medical care is different; it's a "right" rather than a "good." This objection may be over-come in some part through a differential pricing based on family earnings. (See Feldstein [7]).

The significance of the above discussion is determined by the magnitude of the elasticity of demand for medical care. For the case of office visits, this has been simply illustrated in Figure C-1. In both panels A and B the price of a physician office visit is shown on the vertical axis. The horizontal axis measures the number of physician visits per person per year. The demand curve shows the functional relationship between the number of visits per year as the price varies. Panel A shows the hypothetical case when the demand is highly inelastic, i.e., the consumers are little in-

Figure C-1
Elasticity of Demand - Office Visits

Price

P_0

25% P_0

Demand

Q_0
Q_2

Physician office
visits/year

Panel A

Price

P_0

25% P_0

Demand

Q_0
Q_2
Q_1

Physician
office
visits/year
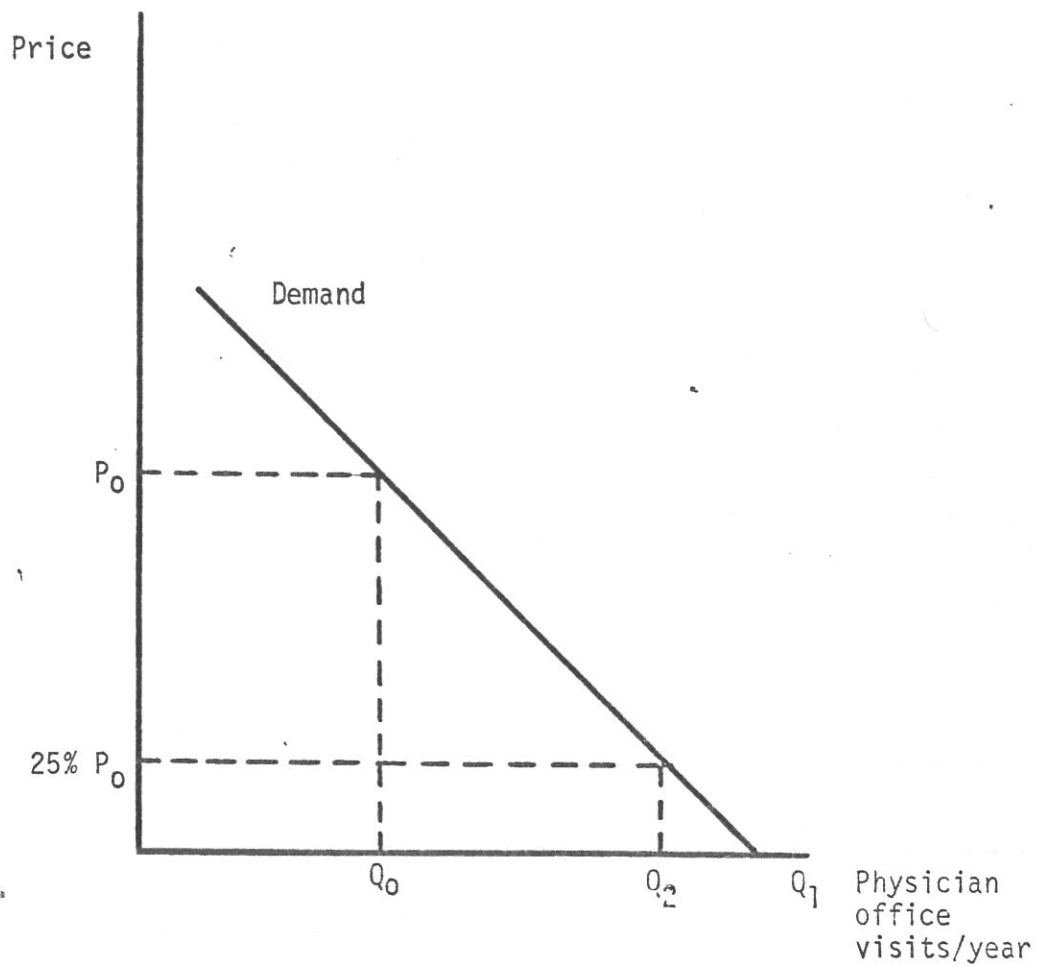
Panel B

fluenced by the monetary charge. They require virtually the same number of visits independent of the price. If we assume that the initial price is P_o, then they would demand Q_o visits per year. From the diagram we can see that if a 25% co-insurance is charged (price = 25% P_o), individuals will demand Q_2 visits per year. At a zero charge, they will demand Q_1 visits.

Panel B shows the case of a relatively elastic demand for medical care. If we again assume that the initial price charges is P_o, then the number of visits demanded per year would be Q_o, as it was in Panel A. However, with a zero charge the number of visits can be determined by the intersection of the demand curve with the horizontal axis. The number of visits demanded would be Q_1. Clearly in this case the impact of the insurance would be to significantly increase the number of office visits demanded per year. This impact may be reduced by instituting a 25% co-insurance as has been shown at 25% P_o. Then the quantity demanded would be Q_2, a much more moderate amount.

The above analysis should be tempered with two additional facts: the first is the recognition that the consumers are worse off after the institution of the 25% co-insurance than with the zero price. First, they will now consume less medical care, i.e., they will go to see a physician less frequently. Of course, the second factor is that they now have to devote some portion of their income to paying their medical expenses. As a result they will now have less to spend on the other necessities and pleasures of life. Of course, these two losses must be balanced against the decrease in cost. If it were a private insurance program one would expect to have lower premiums in the future. Since the U. S. Navy pays the insurance premiums for the beneficiary population, its costs will be reduced. However, it must be emphasized that a part of this reduction is at the beneficiary population's expense. Economic theory does suggest that the consumers could be compensated such that they would voluntarily agree to such a program at a lower overall cost. The argument parallels that of the inefficiency of payments in kind.

The above discussion clearly indicates that the important variable is the slope or the elasticity of the demand curve. If it is highly inelastic, then changes in demand associated with the price impact of an insurance program may be safely ignored. However, if there are indications that the demand is elastic, one would have to expect that an insurance program would not only spread the risk of future uncertainties and be recognized as a fringe benefit or a means of payment, but it will also increase the demand for medical care.

There have been several attempts made to estimate the magnitude of the elasticity of demand for medical care. However, these have not been clear-cut analyses due to the difficulty of constructing a controlled experiment and to the random nature of the incidence of disease. A further problem has been recognized by Richard Bailey [3], an assistant professor of business administration and public health at the University of California, Berkeley. He broadly categorizes demand into three groups: the demand for life sustaining health services, the demand to alleviate acute or chronic conditions, and the demand for preventive health services. He speculates that the elasticity of demand is different in each instance, becoming more elastic as the urgency of the care decreases. Since it is difficult for analysts to study anything but the aggregate statistics, there is a problem of product definition. Michael Grossman [11, 12], has developed a theoretical model with associated implications of the impact of other variables such as age and education on the demand for medical care based on an investment model. All of these influences must be considered.

These variables have also been investigated empirically, although interdependence has prevented definitive results. The effect of the age/sex relationship has been published by the American Medical Association. Data from the 1972 edition of Socio-Economic Issues of Health [27] is included here as Table C-1, which shows the number of physician visits per person for 1968 and 1969 by both sex and age categories. A more complete investigation was completed by Merwyn R. Greenlick, et. al. [9, 10] of the Kaiser Research

TABLE C-1

NUMBER OF PHYSICIAN VISITS PER PERSON PER YEAR, 1968 AND 1969

Year and Sex	All Ages	Under 17 Years	17-24 Years	25-44 Years	45-64 Years	65-74 Years	75 Years and Older
1968							
Both Sexes	4.2	3.4	4.2	4.2	4.7	5.6	5.9
Male	3.7	3.6	3.0	3.1	4.2	5.4	5.5
Female	4.6	3.3	5.2	5.1	5.2	5.7	6.2
1969							
Both Sexes	4.3	3.6	4.0	4.3	4.7	6.1	6.2
Male	3.7	3.7	3.0	3.2	4.1	5.5	5.5
Female	4.7	3.4	4.8	5.3	5.2	6.6	6.7

Foundation. They compared the utilization of ambulatory care by members of the Kaiser Foundation Health Plan in Portland, Oregon with a group sponsored by the Office of Economic Opportunity Comprehensive Neighborhood Health Center Program. Among the socio-economic differences between the two groups were their age/sex composition, the size of the family, the numbers of families headed by women, the geographic proximity to the Kaiser Hospital, income, as well as the associated cultural differences of low income groups. Also the priorities established to select the OEO population emphasize those with low health status. Finally, the health plan members make a co-payment of one or two dollars (depending on their status) for each outpatient visits. The OEO population was not charged at all. Table C-2 shows the varying utilization of the two groups by sex and age brackets. Table C-3 presents the aggregate picture. In total, the OEO group had 11.5% more office visits and 14.1% more hospital days. (Also worthy of note is the overall lower utilization of outpatient visits as compared to the national data shown in Table C-1, which remains unexplained.) Due to the lack of controls and the varying socio-economic factors, it is impossible to attribute this difference in utilization between the OEO and HP members to any sub-group of variables without much speculation. Leveson [16] has also considered other socio-economic variables which are statistically important in explaining the demand for health care but which are difficult to encompass in demand models. Continued and more explicit discussion of his contribution is contained in the following section which reviews estimates of the elasticity of demand.

TABLE C-2

Doctor Office Visits per 100 Persons per Year of Health Plan Sample and
OEO Project Population for Type of Appointment, by Age and Sex (1969)

| | Type of Appointment | | | | | |
| | Regularly Scheduled | | Walk-in | | Total | |
Age/Sex	H.P.	OEO	H.P.	OEO	H.P.	OEO
Male						
0-18	114	84	72	85	186	169
19-44	90	92	72	123	162	215
45-64	186	220	78	151	264	371
Female						
0-18	116	104	77	92	193	196
19-44	277	248	95	161	372	409
45-64	257	289	96	158	353	447
TOTAL						
0-18	115	94	74	89	189	183
19-44	189	204	84	150	273	354
45-64	224	266	88	156	312	422

TABLE C-3

Kaiser Foundation Health Plan, Portland Region, Utilization by
OEO Membership and Remainder of Portland Kaiser Membership (under 65),
1970

	OEO	*Remainder of Health Plan (under 65)*	*OEO % greater*
Doctor office visits per 1000 members	3,645	3,270	11.5
Hospital days per 1000 members	428	375	14.1
Average length of stay in hospital	4.5	4.8	−6.3
Xray procedures per 1000 members	743	794	−6.4
Laboratory procedures per 1000 members	3,444	3,673	−10.0
Average population during year	6,802	123,613	

Empirical Research -- The Demand for Ambulatory Care

The determinants of the demand for ambulatory care have been the subject
of much discussion and empirical analysis in the past. There is no doubt
that there is continuing interest in the subject and there will be more
investigation in the future. To date the studies have been imprecise and
inconclusive; they have not yielded irrefutable facts but rather indications
which are theoretically sound. The general conclusion has been that a
higher price would result in a smaller effective demand for ambulatory care.
However, the slope or the price elasticity of the demand curve has not been
satisfactorily estimated. In part this results because these parameters
are not constant for any one individual throughout the range of the demand
curve. Additionally, there are many other variables upon which the demand
for ambulatory care has been shown to depend and whose effects have not and
cannot be completely captured. Finally, the product has been imperfectly
defined. Despite empirical uncertainties, the importance of the problem
demands further attention. As such, a detailed review of the past and
the potential future studies of the effects of co-insurance and deductibles
will follow.

While at the Rand Corporation, Irving Leveson [16] wrote the mimeograph
"The Demand for Neighborhood Medical Care." (Mr. Leveson is now at the
Health Services Administration of New York City.) Included there was an
excellent discussion of the empirical problems encountered while attempt-
ing to measure the price or time elasticity of the demand for medical care.
One of the problems occurs when not all the relevant variables are included
in the analysis. Leveson cites the example of what could occur when trying
to estimate the impact of income on the demand for health care if, for
example, the health status of the individual is neglected. Suppose people
with higher health status require and demand less medical care. Further
suppose that people with a higher income have a higher status, i.e., that
they are positively correlated due to an improved diet, housing, clothing,
and other environmental factors. Then, if one neglected the health status

when estimating the impact of income, he would underestimate the increased demand for medical care which resulted from the higher incomes. More technically the left-out variable, health status, which has a negative explanatory coefficient on the demand for medical care and which is positively correlated with the level of income of an individual, would result in a negative bias of the estimate of the magnitude of the coefficient measuring the differential impact of an increase in income on the demand for medical care. The same problem would result if other explanatory variables such as education, urbanization, age, race and sex were neglected.

A second problem is one of variable identification. Here Leveson cites the example of the health insurance status of an individual. The effect of health insurance is that it changes the price which the individual has to pay for medical care. However, due to the many different provisions for co-insurance, deductibles and ceiling prices, it is difficult to determine an adequate measure to capture the effects of health insurance on an indivisual's demand for medical care. Without a case by case investigation, one cannot determine the precise impact on the price which the individual foresees that he will have to pay for his medical care due to his insurance.

A third problem is in estimating the correct functional relationship. There are many alternatives to choose from: should the function be continuous or discrete, linear or nonlinear? Consider, for example, the problem of capturing the effect of age. Generally, this is done by grouping discrete intervals of from five to twenty-year durations. Then the difference in the mean effects of these age groups is captured through the use of dummy variables. But the question arises as to whether this grouping of the data is adequate and whether a continuous functional relationship would be more suitable and accurate. If discrete intervals are appropriate, should there be more or fewer of them? Does age not only shift the demand curve but also alter the slope? These problems cannot be completely solved; however, they are probably not as overwhelming as the tone of this discussion would suggest. The solution is often not quickly found nor is it precisely determined. However, more

accurate estimates are derived and, if properly interpreted, can lead to sound management decision.

The subject of Leveson's analysis was the Queensbridge Health Maintenance Service which was established in November of 1961. Its 1400 residents were offered a variety of ambulatory services without charge. The sample used consisted of 1219 residents, all of whom were over the age of 60. A sub-sample of 343 persons was selected, all of whom had heart conditions. Multiple regression analysis was performed to explain the number of out-patient visits for each person, using socio-economic variables. Among these variables were age, health status, sex, race, income, marital status, education, and employment status. Also included as variables in the re-gression analysis were travel time (which when multiplied by an individual's opportunity cost yields the price of his medical care) and whether or not the individual had health insurance. The regression model predicted that longer travel times, i.e., a greater cost, would indicate fewer outpatient visits per year and that if an individual had health insurance, which tends to lower the cost of alternative sources of care, an individual would be less likely to take advantage of the free clinic. Both of these results are in accord with economic theory, i.e., the own price elasticity of any product or service is negative and the cross price elasticity with respect to sub-stitute goods is positive. These results are far from conclusive as neither of the coefficients are statistically significant at the 5% level. Both, however, are of the right sign (negative) and do provide some indication that the well accepted laws of economics also apply to the demand for medical care.

Two other studies, [21, 22, 25] both published in the June 1972 Social Security Bulletin, have used the same data base to attempt to measure the effect of co-insurance on the use of ambulatory services. Initially, we will concentrate on the subject of the two studies and then focus in more detail on each. The faculty, staff and their families at Stanford University participated in a prepaid group practice provided by the Palo Alto Medical

Clinic. During the time interval which was subject to investigation, there was an average of 94 physicians on the staff. The clinic provides ancillary services such as x-rays, laboratory tests, and physical therapy on site. In 1966 those who wished to participate were entitled to physician services and outpatient ancillary services at no charge above the monthly premiums which all had to pay. There were some minor exclusions but they are not relevant to this analysis. The clinic found that it had greatly underestimated the demand for services by the plan members. As a result the contract was re-negotiated and a slight increase in premium was accompanied by a uniform 25% co-insurance provision, initially applied on April 1, 1967. The two studies compared data from 1966 when there was no co-insurance and from 1968, nine months after the 25% co-insurance provision was first instituted. The study population includes only those members who were covered by the plan during the full 12 months of both 1966 and 1968. Thus, to great extent the socio-economic charateristics of the population have been held constant. The entire population is two years older in 1968, but except for the changes dictated by time they were identical to the population in 1966.

Ann Scitovsky and Nelda Synder [25] analyzed the data and published their results in "Effect of Co-Insurance on the Use of Physician Services." They are respectively senior research associate and research associate of the Palo Alto Medical Research Foundation, Palo Alto, California. Their results are summarized in Table C-4. The number of physician visits per capita declined in excess of 24%. Outpatient ancillary services declined 11.2% and, after age adjustment, 16.6%. As a result of the decline in services, the per capita costs declined for physician visits in excess of 23% and after age adjustment, in excess of 25%. Similar results were recorded for ancillary services. As explained in footnote 2 in that table, these figures are prior to the 25% co-insurance payment and, since the 1968 fee schedule was used, are not dependent on the impact of the inflation of medical care charges.

The paper also reports more detailed analysis which we have included in Table C-5 and C-6. Table C-5 shows the per capita number of physician

TABLE C-4

—Per capita number and per capita cost of physician visits and of outpatient ancillary services, by type of service, 1966 and 1968

Type of service	1966	1968	Percentage change	Percentage change, age-adjusted [1]
	Per capita number			
Physician visits, total	5.683	4.315	−24.1	−24.8
Outpatient ancillary services, total	6.026	5.349	−11.2	−16.6
Laboratory tests	3.743	3.231	−13.7	−19.2
X-rays	.606	.534	−11.9	−19.6
All other	1.677	1.584	−5.5	−9.7
	Per capita cost [2]			
Physician visits, total	$78.47	$59.81	−23.8	−25.7
Outpatient ancillary services, total	30.91	27.37	−11.5	−19.2
Laboratory tests	13.02	12.47	−4.2	−10.0
X-rays	8.55	7.61	−11.0	−20.4
All other	9.34	7.29	−21.9	−30.2

[1] Age adjusted by applying the 1968 age distribution of male and female members aged 2–62 for all occupations to the utilization rates of the different age-sex-occupation groups, with children under age 2 in 1966 and persons aged 63 and over in 1968 excluded. Since this correction in most instances did not change the results very much, the calculations were not made for all tables.
[2] The services received by GHP members in 1966 and 1968 were priced in terms of the 1968 fee schedules of the different departments of the Palo Alto Medical Clinic. The 1968 figures relate to costs before the 25-percent coinsurance payment.

TABLE C-5

Per capita number of physician visits by age, occupation, and sex, 1966 and 1968

Age	All occupations			Faculty			Other professional staff			Nonprofessional staff		
	1966	1968	Percentage change	1966	1968	Percentage change	1966	1968	Percentage change	1966	1968	Percentage change
Male												
All ages	5.048	3.868	−23.4	5.359	4.168	−22.2	4.945	3.547	−28.3	4.589	3.874	−15.6
Age-adjusted			−22.8			−20.2			−26.7			−20.2
Under 5	5.919	4.582	−22.6	6.140	5.370	−12.5	6.131	4.452	−27.4	4.077	2.667	−34.6
2–4 [1]	3.922	4.582	+16.8	3.960	5.370	+35.6	4.088	4.452	+8.9	2.600	2.667	+2.6
5–14	5.142	3.670	−28.6	5.556	4.206	−24.3	5.148	3.583	−30.4	4.021	2.231	−44.5
15–18	4.694	3.620	−22.9	4.848	4.000	−17.5	5.029	4.103	−18.4	4.067	2.333	−42.6
19–24	3.400	1.686	−50.4	2.000	1.160	−42.0	4.300	1.720	−60.0	3.727	2.300	−38.3
25–44	4.068	3.253	−20.0	4.618	3.959	−14.3	3.713	3.000	−19.2	3.704	2.250	−39.3
45–64	5.967	4.896	−17.9	6.007	4.591	−23.6	6.103	4.214	−31.0	5.758	6.180	+7.3
45–62 [1]	5.967	4.851	−18.7	6.007	4.455	−25.8	6.103	4.218	−30.9	5.758	6.402	+11.2
Female												
All ages	6.297	4.746	−24.6	6.312	4.811	−23.8	6.024	4.676	−22.4	6.729	4.753	−29.4
Age-adjusted			−26.3			−28.1			−21.0			−32.4
Under 5	5.946	5.200	−12.5	5.978	6.333	+5.9	6.018	4.577	−23.9	5.455	3.143	−42.4
2–4 [1]	5.477	5.200	−5.1	5.966	6.333	+6.2	5.355	4.577	−14.5	3.400	3.143	−7.6
5–14	4.143	3.238	−21.8	4.521	3.674	−18.7	4.125	3.206	−22.3	2.816	1.559	−44.6
15–18	4.317	3.686	−14.6	3.805	4.071	+7.0	4.462	3.978	−10.8	5.467	1.941	−64.5
19–24	5.865	1.982	−66.2	2.667	1.893	−29.0	7.250	1.850	−74.5	7.667	2.625	−65.8
25–44	7.022	5.328	−24.1	7.267	4.781	−34.2	6.782	5.750	−15.2	7.055	5.457	−22.7
45–64	7.994	5.959	−25.5	8.602	6.522	−24.2	7.667	5.770	−24.7	7.732	5.604	−27.5
45–62 [1]	7.994	5.582	−30.2	8.602	5.612	−34.8	7.667	5.709	−25.5	7.732	5.459	−29.4

[1] Only persons who were GHP members the full 12 months of both 1966 and 1968 were included in the study; the data therefore exclude children under age 2 in 1968 and persons aged 63 and over in 1966.

TABLE C-6

—Per capita number of physician visits by age in 1966, sex, and occupation, 1966 and 1968

Age in 1966	All occupations			Faculty			Other professional staff			Nonprofessional staff		
	1966	1968	Percentage change	1966	1968	Percentage change	1966	1968	Percentage change	1966	1968	Percentage change
Male												
All ages	5.048	3.868	−23.4	5.359	4.168	−22.2	4.945	3.547	−28.3	4.589	3.874	−15.6
Under 5	5.919	4.210	−28.9	6.140	4.740	−22.8	6.131	4.180	−31.8	4.077	2.308	−43.4
2–4	3.922	3.766	−4.0	3.960	3.920	−1.0	4.088	3.971	−2.9	2.600	1.600	−38.5
5–14	5.142	3.566	−30.6	5.556	4.183	−24.7	5.148	3.385	−34.2	4.021	2.383	−40.7
15–18	4.694	3.045	−35.1	4.848	2.935	−39.5	5.029	3.771	−25.0	4.067	2.367	−41.8
19–24	3.400	1.400	−58.8	2.000	1.556	−22.2	4.300	1.400	−67.4	3.727	1.273	−65.8
25–44	4.068	3.384	−16.8	4.618	3.799	−17.7	3.713	3.162	−14.8	3.704	2.963	−20.0
45–62	5.967	5.024	−15.8	6.007	4.859	−19.1	6.103	4.155	−31.9	5.758	6.220	+8.0
Female												
All ages	6.297	4.746	−24.6	6.312	4.811	−23.8	6.024	4.676	−22.4	6.729	4.753	−29.4
Under 5	5.946	4.500	−24.3	5.978	5.348	−10.5	6.018	4.127	−31.4	5.455	2.818	−48.3
2–4	5.477	3.862	−29.5	5.966	4.207	−29.5	5.355	3.645	−31.9	3.400	3.200	−5.9
5–14	4.143	3.115	−24.8	4.521	3.607	−20.2	4.125	3.132	−24.1	2.816	1.237	−56.1
15–18	4.317	3.549	−17.8	3.805	3.488	−8.3	4.462	3.885	−12.9	5.467	3.133	−42.7
19–24	5.865	4.405	−24.9	2.667	1.583	−40.6	7.250	3.313	−54.3	7.667	10.111	+31.9
25–44	7.022	5.174	−26.3	7.267	4.826	−33.6	6.782	5.592	−17.5	7.055	4.945	−29.9
45–62	7.994	6.099	−23.7	8.602	6.885	−20.0	7.667	6.044	−21.2	7.732	5.537	−28.4

visits by age, occupation and sex in 1966 and 1968. Table C-6 presents the same data as Table C-5 according to an individual's age in 1966. Therefore, for example, if an individual were 24 years old in 1966, then in Table C-6 he would be reported in the 19-24 bracket for both 1966 and 1968. In Table C-5 for the 1966 category, he would be reported in the 19-24 bracket but in the 1968 column he would be reported in the 25-44 age bracket. The percentage change between the two years is quite uniformly negative, although there are several positive values reported. This may be explained due to the random nature of unincluded variables or perhaps the small sample size; however, Scitovsky and Snyder attempt no such explanation. On average they have found that institution of a 25% co-insurance has had a significant impact on outpatient services.

Their article also attempts to address other difficult questions. The one of primary importance was whether co-insurance reduced "over-utilization," "unnecessary services," and "sniffle complaints." If not, then did the co-insurance discourage people from seeking "necessary services?" They tentatively conclude that the major impact of co-insurance was on minor complaints rather than those of a more serious variety based on three comparisons, each of which may be faulted and yet they do provide some indication. The first comparison was between the number of visits per capita to the clinic as compared with other prepaid plans in the United States in total. In 1966, the clinic had the highest number of visits of any of the groups compared. Their second approach was to compare the decline in the number of ancillary services with the decline in physician outpatient visits in the two years. Of course, ancillary services declined less than outpatient visits which may indicate a smaller proportion of "sniffle complaints" and a higher proportion of serious complaints requiring diagnostic tests occurred in 1968 relative to the 1966 experience. The final indication was that the case histories in the two periods were investigated with certain diseases and complaints classified as being minor. It was found that the minor complaints declined to a greater extent than the total, suggesting that the primary impact of co-insurance had been on over-utilization.

The study is a strong one and yet did have one limitation. It is that there is a lack of information on the use of non-clinic physicians by members of the prepaid plan. The authors tend to discount this as an important factor due to the increased cost of going elsewhere and due to the fact that if individuals did not want to belong to this plan, they could have joined a university sponsored Blue Cross/Blue Shield plan which provided free choice of physicians. Since the study population had to be members of the prepayment plan for the entire year period, switching was not allowed and it was thought outside use would be minimal, and in any event would not be expected to change between the two periods.

The second study of this data base was by Charles Phelps and Joseph Newhouse, both economists at the Rand Corporation. They published their results in a Social Security Bulletin in an article entitled, "Effect of Co-Insurance: A Multivariate Analysis" [21] and also in the Rand paper, "Effects of Co-Insurance on the Demand for Physician Services." [22] Using dummy variables Phelps and Newhouse attempted to capture the impact of age, the relationship to the main subscriber, sex, distance from the Palo Alto Medical Clinic, occupation, and family size as well as co-insurance on the demand for physician's visits, physician's total cost, ancillary services, and the total cost for ancillary services. For a family of four whose head is a member of the non-professional staff, is 25-44 years old, and lives within five miles of the clinic, their regression model predicted that a 25% co-insurance would result in a 32% reduction in the physicians visits. Plan members with other demographic characteristics would also decrease their effective demand for physician visits but to varying degrees. The model also predicts that this would result in a 28% decline in expenditures. These results are in general agreement with those of Scitovsky and Snyder.

Phelps and Newhouse also address the question of the role of time in serving as a pricing mechanism. If certain assumptions are validated, its effect can be measured by considering the differential impact of co-insurance on the number of physician visits demanded by different

plan members. One would expect that those members of the plan who have
low opportunity costs for their time would demand more services than
others. In addition, since the relative price change would be higher for
them than it would be for people with high time costs, we would expect
to see a greater impact of co-insurance in terms of decreasing the number
of visits between the two time periods. Both of these results which had
been anticipated, did in fact occur. While female subscribers used
slightly more services than male subscribers did, female dependents (who
are assumed to be neither in the labor force nor to have high time costs)
used substantially more physician services than did either the male sub-
scriber or the female subscriber. Additionally, in the regression equation
employed to measure the change in demand from 1966 to 1968, the coefficient
of the female dependent was the only one which the researchers found to be
significantly different from zero. Unexpectedly, the coefficient measuring
the impact of increased distance which can be translated to both transpor-
tation cost and time cost was not determined to be significantly different
from zero.

The impact of co-insurance has been clearly shown. The influence of socio-
economic variables is open to question. An initial criticism is that many
of the coefficients of the regression which have been estimated are insign-
icant. As a result of this, a low explanatory power, as measured by R^2,
results in all eight equations estimated. In Equation 1 which explains
the demand for physician visits, only eight of the 17 variables were signi-
ficantly different from zero, among them those which measured the impact
of co-insurance, that of being a female dependent, living at a distance
greater than 20 miles from the clinic, and age variables. Also there is
a possible bias due to autocorrelation of the error terms. Phelps and
Newhouse also discuss possible biases in the sample itself. They consider
and reject the possibility that there was an incidence of an epidemic or
the like occurrence which would cause a greater demand for physician ser-
vices in 1966 than in 1968. They also consider the possibility that some
members of the plan received physician services outside the clinic. In

this they concur with Scitovsky and Snyder doubting that it would be a significant problem.

Jan Paul Acton, also of the Rand Corporation, has completed a study for the U. S. Office of Economic Opportunity and the New York City Health Services Administration. It has been published by the Rand Corporation and is entitled, "Demand for Care Among the Urban Poor with Special Emphasis of the Role of Time" [1]. The data he used is from the household surveys conducted in 1968 by the National Opinion Research Center for the Office of Economic Opportunity. They were conducted in Brooklyn, New York on the characteristics of the population before two neighborhood health centers were established. Their general characteristics were that they were poor, had few years of education and were predominatly Puerto Rican or black. Approximately a third of the population had seen a physician at the free standing clinic during the year, from 40% to 48% had seen a physician in a private office and the rest had not seen any at all.

Acton used Tobit analysis to estimate the impact of time as well as many other socio-economic variables on the demand for health care. He found the time elasticity of the demand for private care ranged from -.25 to -.34 and for public care ranged from -.6 to -1.0. Apparently travel time was acting as a price mechanism. The waiting time elasticity was reported to be -.12 for public care and -.05 for private care. Increased income was found to increase the demand for medical care although it also caused a substitution of private care for public care. It was also shown that people with no ambulatory insurance demanded less care by private physicians. Health status was the most significant indicator of the demand for health care. Education had a negative impact on the public clinical services. It was also reported that racial minorities tend to substitute public for private care.

There are two difficiencies with this study, the first of which is that the price of private care was not included as an explanatory variable in the regression model. The exclusion of a relevant variable results in

biased estimates of all of the coefficients of variables which are corre-
lated with the left-out variable. Also the value of R^2, which is a measure
of the explanatory power of the regression model, are again very low. As
tests would indicate, many of the coefficients are not significantly different
from zero. The regression results are believable but far from conclusive.

Phelps and Newhouse have also written a survey of the literature entitled,
"Co-Insurance and the Demands of Medical Services" [20]. In this they pro-
vide a theoretical foundation as well as a survey of empirical evidence
indicating the magnitude of the elasticity and demand for medical services.
They review articles by Feldstein [6], Davis and Russel [5], and Rosett and
Huang [24], which may be found in current economic journals and which are
referenced within our bibliography. We may note that they criticize these
studies severely. Their primary flaws are that they inadequately para-
meterize the relevant insurance policy variables, outpatient and inpatient
services are treated identically, they use aggregate data which required
severe additional assumptions, and they treat insurance coverage as an
exogenous rather than endogenous variable. The result of all these flaws
are that the magnitude of the elasticity of demand is overestimated.

Phelps and Newhouse also discuss other microeconomic studies which do tend
to support their analysis as well as that of Scitovsky and Snyder of the
Palo Alto Clinic. An interesting investigation was to see how insurance
companies viewed the effects of deductibles and co-insurance. They asked
four insurance companies to quote premiums based on insurance policies with
co-insurance rates from 10% to 25% and deductibles ranging from $25 to
$1,000. Of course, when the companies quote these rates they must take
account of two effects: The first is that, given the amount of the lia-
bility, higher co-insurance rates or deductibles would imply that the
insurance company would have to pay a smaller share. Therefore, they
charge a lesser premium. The second effect that higher co-insurance rates
and deductibles have is that policy holders would be faced with a higher
price for medical care and as a result may demand less of it. Using linear
regression techniques, Phelps and Newhouse attempted to isolate each of

these effects. They found that the arc elasticity over a co-insurance range from 0 to 25% was equal to .043. This is approximately one-third of the elasticity they found in the Palo Alto data which was concerned solely with the physician visits. Of course, the insurance investigation was for total medical care.

There may be one additional problem in this investigation due to the fact that the insurance industry is highly regulated. If the market could not play a significant role in determining these rates, then the analysis performed is invalidated as costs may not have justified the differences in premium rates. Apparently there is also the assumption here that the loading factor, i.e., the administrative costs, are a constant proportion of the premiums. However, this is not stated in the report.

Phelps and Newhouse also cite a study from the province of Saskatechwan in Canada. Enrollees in the health care plan were provided with full coverage financed by land taxes, personal premium payments, and government grants. Doctors were paid on the fee for service basis but not by the patients. However, because of the high utilization, co-payment provision was instituted in 1953. For office visits patients were charged $1. Home calls during the day were charged for $2 but at night $3. These rates imply a co-insurance of 41% for office visits and 42% for home visits. The result of this co-payment was a 17% reduction in office visits and a 60% decline in home visits. There was undoubtedly some substitution of office visits for home visits as the relative prices changed. These results are in general agreement with the Palo Alto study although their magnitude does vary, probably in large part due to the difference in the co-insurance rates as well as the substitution effect which must have occurred.

Also included in the survey is reference to two studies attempting to measure the effect of co-insurance on the demand for prescription drugs. The first considers data from Windsor, Ontario for the year June 1, 1962-- May 31, 1963. Prescriptions Services Incorporated offered all prescriptions to its subscribers for co-payment of 35¢ per prescription. In effect, this

was an average co-insurance rate of approximately 10%. By comparing per capita utilization with the community as a whole which paid the entire price for the prescription, some measure of the impact can be estimated. Table C-7 summarizes the results. The implied arc elasticity of the number of prescriptions was .36 for the range .10 to 1.0. This study is not without problems, however, as one would expect those members of the community who anticipated higher drug charges to be predominatly members of Prescription Services Incorporated. Because of this, a biased sample results and the conclusions are somewhat suspect. Phelps and Newhouse have estimated that the elasticity of expenditures for co-insurance range 0--25% is .07.

The second study attempting to measure the effect of co-insurance on the demand for prescriptions is based on 13 years data from the British National Health Service. During that period the current price varied from 0 to 2.5 shillings. Again using regression techniques Phelps and Newhouse estimated the price elasticity to be .10, in fairly close agreement with the previous study cited. The study's weakness is that only one variable, price, is included in the equation of demand and only approximately half of the variance is explained by the regression model. It appears that there may be left-out variables which would bias the results.

We have also contacted Sandra Salviter of the Kaiser Foundation Health Plan of Southern California to inquire about their studies. They do have a good potential data source as they have three types of subscribers with three different levels of premiums. The AA subscribers are not charged for doctor office visits, eye examinations, physical therapy, lab tests or x-rays. The B subscribers are charged $2 for a doctor office visit, an eye examination or physical therapy. The C dependents are charged $2 for an office visit, $2 for an eye examination and 1/2 the prevailing charge for physical therapy or ancillary services. The Medicare members are not charged for any of these services. At our request Ms. Salviter reviewed their utilization statistics. She found that the AA subscribers,

TABLE C-7

PRESCRIPTION RATES WITH AND WITHOUT DRUG INSURANCE
FOR ONE YEAR IN WINDSOR, ONTARIO

	Community[a]	PSI	PSI (age adjusted)
Prescriptions per person	2.19 (1.81-2.57)	4.08	4.20
Expenditures per person	$8.29 (6.89-9.69)	$16.48	$16.64
Mean price per prescription	$3.78	$ 4.03	$ 3.96

Source: Greenlick and Darsky (1968), p. 2125.

[a]Sample for community data; 95 percent confidence limits in parentheses.

who consume medical care at a zero marginal cost, had a 17% higher utilization rate than the rest of the subscribers to the health plan.   The implied arc elasticity is -.09.   Both of these results are very preliminary as the socio-economic variables have not been controlled.   We are currently investigating the age and sex distribution between the two groups in an attempt to eliminate that factor.   More research is required before definitive results will be yielded.

Conclusions

The empirical investigation which has been reviewed here is evidence enough that the demand for ambulatory care is dependent on the price. In order to standardize that which has been discussed above, we will briefly review the studies and the reduction in number of outpatient visits which their results imply would occur if 25% co-insurance were instituted. Our estimates have been derived by assuming a constant elasticity over the relevant range. Generally this involves both interpolation or extrapolation.

The study by Leveson of retirement groups in New York indicated that increased travel time would reduce the number of physician visits per year. However, due to his use of dummy variables, it is not possible to calculate a time elasticity. Scitovsky and Snyder reviewed the data from a Palo Alto Clinic. They found that 25% co-insurance would result in a 24% decline in physician visits and a 23% decline in cost. Phelps and Newhouse, reviewing this same data, found that for their "average" family the 25% co-insurance would result in a 32% reduction in the visits and a 28% decline in cost. They also found that groups which would be expected to have a lower time opportunity cost would be affected to a greater extent than others. Jan Paul Acton completed a study of low income groups in New York City. Its focus was on the effects of waiting and traveling time. He found that for public care a 25% increase in traveling time would imply a 75% reduction in the number of outpatient visits. For private care this increase in traveling time would result in a 66% decline in the number of visits. These large magnitudes are in some part a reflection of the substitution of alternative sources of care rather than an absolute decline in the amount of care demand. Acton's results also imply a 25% increase in waiting time would decrease the number of physician visits to private practices by 22% and to public clinics by 10%. The Phelps and Newhouse study of insurance premiums found that a 25% co-insurance would decrease physician expenditures by 30%. Their review of the Saskatchewan study showed that a 40% co-insurance would reduce physician office visits by 17% and home visits by 60%. There is undoubtedly a substitution effect between home visits and office visits as their relative

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prices changed in this last experiment. The preliminary results from the
Kaiser-Permanente subscribers suggest that a 25% co-insurance would result
in a 53% reduction in the number of physician offices. These studies in-
dicate that the range is still only vaguely defined. In large part this
is expected as the price elasticity would vary among socio-economic groups.
However, further research would probably narrow the range.

The magnitude of the above estimates may be too great to be applied directly
to the current Navy situation as they don't account for the time price which
the population is paying. Yoram Barzel's theory of rationing [4] by waiting
would suggest that shorter queues would be anticipated at higher prices. But
this would reduce the time price of care, and, ceteras paribas, increase the
quantity demanded. To the extent that this would occur, the price elastici-
ties discussed above are too large.

The implications of the above findings are significant. For the moment let
us assume that a 25% co-insurance would reduce the total cost of the physician's
services by 25%. The overall reduction in cost to the U. S. Navy would then be
the compound amount of these two reductions or approximately 44%. As was ex-
plained earlier, these cost reductions occur in part because the beneficiary
population is now worse off. They would then have less disposable income
after medical expenses, and would see a physician less frequently. However,
they could be compensated, perhaps with an additional allowance, such that
they would be as well satisfied as they were prior to the institution of the
co-insurance at a smaller total expense to the government.

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APPENDIX D: COST TABLES, ALTERNATIVE SCENARIOS

The thirty-six tables presented here show the change in costs by Region resulting from exclusion of selected beneficiary groups. Each group of nine cost tables are based on different input parameters which are presented along with the resulting costs.

TABLE D-2
COST IMPLICATIONS-NO DEPENDENT OUTPATIENTS

U1C	DELTA OPV	DELTA U1C COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	15169	-227535	70	212365	106183	-15170
BOSTON	18077	-271155	70	253077	126539	-18078
PHILADEL	30108	-451620	70	421512	210756	-30108
ANNAPOLS	16112	-241680	70	225568	112784	-16112
NMC BETH	0	0	70	0	0	0
HMC PENS	0	0	70	0	0	0
NH GTLK	64376	-965640	70	901264	450632	-64376
QUANTICO	40215	-603225	70	563009	281504	-40216
BREMERTON	53012	-795180	70	742168	371084	-53012
KEY WEST	27905	-418575	70	390669	195334	-27906
CCHRISTI	24768	-371520	70	346752	173376	-24768
GUAM	36451	-546765	70	510313	255156	-36452
CP LEJEN	136875	-2053125	70	1916249	958124	-136876
OAKLAND	49305	-739575	70	690269	345134	-49306
NH BETH	100408	-1506120	70	1405712	702856	-100408
NH PENS	81386	-1220790	70	1139404	569701	-81386
NDSBETH	0	0	70	0	0	0
NMS BETH	0	0	70	0	0	0
HCS GTLK	0	0	70	0	0	0
HCS SDGO	0	0	70	0	0	0
NSHHBETH	0	0	70	0	0	0
AMI PENS	0	0	70	0	0	0
MEMPHIS	42295	-634425	70	592129	296064	-42296
ST ALBAN	15720	-235800	70	220080	110040	-15720
CP PENDL	71890	-1078350	70	1006460	503229	-71390
BEAUFORT	31628	-474420	70	442792	221396	-31628
GTMO BAY	8660	-129900	70	121240	60620	-8660
N LONDON	46433	-696495	70	650061	325030	-46434
YOKOSUKA	18199	-272985	70	254785	127393	-18200
L BEACH	65600	-984000	70	918400	459200	-65600
ROOS RDS	14539	-218085	70	203545	101773	-14540
SUBIC PI	17811	-267165	70	249353	124677	-17812
ORLANDO	22349	-335235	70	312885	156443	-22350
LEMOORE	24715	-370725	70	346009	173004	-24716
NAPLES	27083	-406245	70	379161	189580	-27084
PATUXENT	25571	-383565	70	357993	178996	-25572
PT HUENE	23633	-354495	70	330861	165431	-23634
ROTA	22277	-334155	70	311877	155939	-22278
TAIPEI	14615	-219225	70	204609	102305	-14616
PORTS VA	318100	-4771500	70	4453399	2226700	-318101
MC SDGO	236437	-3546555	70	3310115	1655058	-236440
CHASTON	84344	-1265160	70	1180816	590408	-84344
JAXVILLE	102484	-1537260	70	1434776	717388	-102484
NEWPORT	98328	-1474920	70	1376592	688296	-98328
TOTAL	2026878	-30403170	70	28376269	14188133	-2026901

TABLE D-3

COST IMPLICATIONS-NO DEPENDENT PATIENTS

UIC	DELTA ADMISSIONS	DELTA IP BEDS	DELTA OPV	DELTA UIC COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	547	14	15169	-493311	612769	120952	119458
BOSTON	681	34	18077	-916611	751569	144926	-165042
PHILADEL	1083	53	30108	-1457772	1214268	239997	-243504
ANNAPOLS	292	11	16112	-450504	439312	120668	-11192
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	1379	45	64376	-1819920	1910692	487865	90772
QUANTICO	771	25	40215	-1077825	1127381	302321	49556
BREMERTON	872	23	53012	-1269780	1380472	394628	110692
KEY WEST	558	18	27905	-760287	799125	210400	38838
CCHRISTI	704	23	24768	-808152	862080	192384	53928
GUAM	1066	29	36451	-1097301	1290625	283938	193324
CP LEJEN	2785	89	136375	-3742701	3954869	1033319	212168
OAKLAND	1658	61	49305	-1897599	1903925	389900	6326
NH BETH	1917	95	100408	-3309600	2808956	754615	-500644
NH PENS	1059	29	81386	-1771326	1914592	598294	143266
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHHBETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	900	31	42295	-1222929	1250929	320364	28000
ST ALBAN	191	8	15720	-397672	359892	115197	-27780
CP PENDL	1487	56	71890	-2141454	2094944	543378	-46510
BEAUFORT	702	21	31628	-873084	956656	240350	83572
GTMO BAY	245	8	8660	-281772	300580	67235	18808
N LONDON	609	18	46433	-1038207	1095849	341473	57642
YOKOSUKA	420	16	18199	-576729	562225	138733	-14504
L BEACH	656	26	65600	-1477584	1398592	476912	-78992
ROOS RDS	411	14	14539	-483861	504397	112870	20536
SUBIC PI	555	18	17811	-608877	655613	139662	46736
ORLANDO	627	18	22349	-582027	771849	173372	189822
LEMOORE	648	20	24715	-750405	820345	190500	69940
NAPLES	560	21	27083	-804909	789081	204700	-15828
PATUXENT	454	14	25571	-649341	690321	191254	40980
PT HUENE	500	17	23633	-677223	696861	178931	19638
ROTA	477	17	22277	-656883	661041	168818	4158
TAIPEI	590	23	14615	-655857	636489	118235	-19368
PORTS VA	4915	176	318100	-8112634	8051179	2359405	-61505
MC SDGO	4619	161	236437	-6602979	6691223	1779771	88244
CHASTON	1727	73	84344	-2650992	2444930	637037	-206012
JAXVILLE	1480	54	102484	-2562396	2518136	757348	-44260
NEWPORT	1579	48	98328	-2386152	2532420	730929	146268
TOTAL	39724	1404	2026878	-57056706	57454237	15260681	397531

COST IMPLICATIONS-NO RETIRED INPATIENTS

UIC	DELTA OP BED	DELTA OBD	DELTA UIC COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMEN
PORTS NH	4	714	-75936	88	68112	44440	-7824
BOSTON	53	8761	-1101072	497	384678	250985	-716394
PHILADEL	90	13974	-1708560	617	477558	311585	-1231002
ANNAPOLS	11	1287	-208824	114	88236	57570	-120588
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	45	7126	-854280	469	363006	236845	-491274
QUANTICO	5	792	-94920	96	74304	48480	-20616
BREMERTON	15	2118	-284760	247	191178	124735	-93582
KEY WEST	7	847	-132888	68	52632	34340	-80256
CCHRISTI	9	1244	-170856	138	106812	69690	-64044
GUAM	4	771	-75936	54	41796	27270	-34140
CP LEJEN	16	2332	-303744	195	150930	98475	-152814
OAKLAND	65	9496	-1233960	836	647064	422180	-586896
NH BETH	108	16401	-2050272	1052	814248	531260	-1236024
NH PENS	30	4669	-569520	375	290250	189375	-279270
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	14	1910	-265776	166	128484	83830	-137292
ST ALBAN	39	6390	-740376	380	294120	191900	-446256
CP PENDL	28	3565	-531552	301	232974	152005	-298578
BEAUFORT	4	680	-75936	77	59598	38885	-16338
GTMO BAY	0	11	0	3	2322	1515	2322
N LONDON	3	441	-56952	53	41022	26765	-15930
YOKOSUKA	3	431	-56952	17	13158	8585	-43794
L BEACH	53	7974	-1006152	627	485298	316635	-520854
ROOS RDS	4	589	-75936	53	41022	26765	-34914
SUBIC PI	1	169	-18984	20	15480	10100	-3504
ORLANDO	21	4667	-398664	476	368424	240380	-30240
LEMOORE	2	271	-37968	37	28638	18685	-9330
NAPLES	0	35	0	8	6192	4040	6192
PATUXENT	1	126	-18984	20	15480	10100	-3504
PT HUENE	6	892	-113904	82	63468	41410	-50436
ROTA	1	129	-18984	17	13158	8585	-5826
TAIPEI	0	32	0	10	7740	5050	7740
PORTS VA	81	12405	-1537704	996	770904	502980	-766800
MC SDGO	160	23621	-3037440	1801	1393974	909505	-1643466
CHASTON	27	3060	-512568	302	233748	152510	-278820
JAXVILLE	40	5409	-759360	492	380808	248460	-378552
NEWPORT	18	2543	-341712	255	197370	128775	-144342
TOTAL	973	145882	-18471432	11039	8544186	5574695	-9927246

COST IMPLICATIONS-NO RETIRED OUTPATIENTS

UIC	DELTA OPV	DELTA UIC COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST--PAT	DELTA COST GOVERNMENT
PORTS NH	2678	-40170	70	44990	31868	4320
BOSTON	8945	-134175	70	150276	106445	16101
PHILADEL	12042	-180630	70	202305	143299	21675
ANNAPOLS	5611	-84165	70	94264	66770	10099
NMC BETH	0	0	70	0	0	0
AMC PENS	0	0	70	0	0	0
NH GTLK	12498	-187470	70	209966	148726	22496
QUANTICO	3343	-50145	70	56162	39731	6017
BRMERTON	13290	-199350	70	223272	158151	23922
KEY WEST	3172	-47580	70	53289	37746	5709
CCHRISTI	4961	-74415	70	83344	59035	8929
GUAM	2001	-30015	70	33616	23811	3601
CP LEJEN	6759	-101385	70	113551	80432	12166
OAKLAND	23437	-351555	70	393741	278900	42186
NH BETH	22031	-330465	70	370120	262168	39655
NH PENS	15468	-232020	70	259862	184069	27842
NDSBETH	0	0	70	0	0	0
NMS BETH	0	0	70	0	0	0
HCS GTLK	0	0	70	0	0	0
HCS SDGO	0	0	70	0	0	0
NSHABETH	0	0	70	0	0	0
AMI PENS	0	0	70	0	0	0
MEMPHIS	4621	-69315	70	77632	54989	8317
ST ALBAN	9585	-143775	70	161028	114061	17253
CP PENDL	16541	-248115	70	277888	196837	29773
BEAUFORT	2382	-35730	70	40017	28345	4287
GTMO BAY	1224	-18360	70	20563	14565	2203
N LONDON	4102	-61530	70	68913	48813	7383
YOKOSUKA	729	-10935	70	12247	8675	1312
L BEACH	25816	-387240	70	433708	307210	46468
ROOS RDS	1962	-29430	70	32961	23347	3531
SUBIC PI	1040	-15600	70	17472	12376	1872
ORLANDO	18091	-271365	70	303928	215282	32563
LEMOORE	821	-12315	70	13792	9769	1477
NAPLES	460	-6900	70	7728	5474	828
PATUXENT	1342	-20130	70	22545	15969	2415
PT HUENE	7434	-111510	70	124891	88464	13381
ROTA	365	-5475	70	6132	4343	657
THIPEI	281	-4215	70	4720	3343	505
PORTS VA	28209	-423135	70	473911	335687	50776
MC SDGO	47354	-710310	70	795547	563512	85237
CHASTON	10208	-153120	70	171494	121475	18374
JAXVILLE	18821	-282315	70	316192	223969	33877
NEWPORT	6726	-100890	70	112996	80039	12106
TOTAL	344350	-5165250	70	5785063	4097745	619813

TABLE D-6
COST IMPLICATIONS-NO RETIRED PATIENTS

U1C	DELTA ADMISSIONS	DELTA UP BEDS	DELTA OPV	DELTA U1C COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	88	4	2678	-116106	113102	76308	-3004
BOSTON	497	58	8945	-1235247	534954	357430	-700293
PHILADEL	617	90	12042	-1389190	679863	454884	-1209327
ANNAPOLS	114	11	5611	-292989	182500	124340	-110489
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	469	45	12498	-1041750	572972	385571	-468778
QUANTICO	96	5	3343	-145065	130466	88261	-14599
BRMERTON	247	15	13290	-484110	414450	282886	-69660
KEY WEST	68	7	3172	-180468	105921	72086	-74547
CCHRISTI	138	9	4961	-245271	190156	128725	-55115
GUAM	54	4	2001	-105951	75412	51081	-30539
CP LEJEN	195	16	6759	-405129	264431	178907	-140648
OAKLAND	336	65	23437	-1585515	1040805	701080	-544710
NH BETH	1052	108	22031	-2380737	1184368	793428	-1196369
NH PENS	375	30	15468	-801540	550112	373444	-251428
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	166	14	4621	-335091	206116	138819	-128975
ST ALBAN	380	39	9585	-884151	455148	305961	-429003
CP PENDL	301	28	16541	-779667	510862	348842	-268805
BEAUFORT	77	4	2382	-111666	99615	67230	-12051
GTMO BAY	3	0	1224	-18360	22805	16080	4525
N LONDON	53	3	4102	-118482	109935	75578	-8547
YOKOSUKA	17	3	729	-67887	25405	17260	-42482
L BEACH	627	53	23816	-1393392	919006	623845	-474386
ROOS RDS	53	4	1962	-105366	73983	50112	-31383
SUBIC PI	20	1	1040	-34584	32952	22476	-1632
ORLANDO	476	21	18091	-670029	672352	455662	2323
LEMOORE	37	2	821	-50283	42430	28454	-7853
NAPLES	8	0	460	-6900	13920	9514	7020
PATUXENT	20	1	1342	-39114	38025	26069	-1089
PT HUENE	82	6	7434	-225414	188359	129874	-37055
ROTH	17	1	365	-24459	19290	12928	-5169
TAIPEI	10	0	281	-4215	12460	8393	8245
PORTS VA	996	81	28209	-1960839	1244815	838667	-716024
MC SDGO	1801	160	47354	-3747750	2189521	1473017	-1558229
CHASTON	302	27	10208	-665688	405242	273985	-260446
JAXVILLE	492	40	18821	-1041675	697000	472429	-344675
NEWPORT	255	18	6726	-442602	310366	208814	-132236
TOTAL	11039	973	344350	-23636682	14329249	9672440	-9307433

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TABLE D-7
COST IMPLICATIONS-NO RET DEP INPATIENTS

UIC	DELTA OP BED	DELTA OBD	DELTA UIC COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	10	1715	-189840	196	126028	68796	-63812
BOSTON	47	7074	-892248	529	340147	185679	-552101
PHILADEL	60	9341	-1139040	373	561339	306423	-577701
ANNAPOLS	14	1548	-265776	231	148533	81081	-117243
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	34	5460	-645456	691	444313	242541	-201143
QUANTICO	7	1048	-132888	181	116383	63531	-16505
BRMERTON	19	2681	-360696	383	246269	134433	-114427
KEY WEST	5	610	-94920	93	59799	32643	-35121
CCHRISTI	10	1324	-189840	237	152391	83187	-37449
GUAM	6	1089	-113904	137	88091	48087	-25813
CP LEJEN	17	2502	-322728	331	212833	116181	-109895
OAKLAND	74	10786	-1404816	1440	925920	505440	-478896
NH BETH	102	15485	-1936368	1449	931707	508599	-1004661
NH PENS	17	2758	-322728	450	289350	157950	-33378
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AM1 PENS	0	0	0	0	0	0	0
MEMPHIS	19	2672	-360696	367	235931	128817	-124715
ST ALBAN	25	4222	-474600	417	268131	146367	-206469
CP PENDL	29	3676	-550536	460	295780	161460	-254756
BEAUFORT	9	1375	-170856	147	94521	51597	-76335
GTMO BAY	0	10	0	3	1929	1053	1929
N LONDON	3	503	-56952	94	60442	32994	3490
YOKOSUKA	1	132	-18984	17	10931	5967	-8053
L BEACH	44	6545	-835296	798	513114	280098	-322182
ROOS RDS	11	1460	-208824	159	102237	55809	-106587
SUBIC PI	1	234	-18984	60	38580	21060	19596
ORLANDO	20	4490	-379680	790	507970	277290	128290
LEMOORE	2	283	-37968	51	32793	17901	-5175
NAPLES	1	166	-18984	19	12217	6669	-6767
PATUXENT	2	256	-37968	44	28292	15444	-9676
PT HUENE	10	1516	-189840	207	133101	72657	-56739
ROTA	0	82	0	15	9645	5265	9645
THIPEI	0	122	0	24	15432	8424	15432
PORTS VA	84	12911	-1594656	1512	972216	530712	-622440
MC SDGO	103	15283	-1955352	1902	1222986	667602	-732366
CHASTON	40	4469	-759360	523	336289	183573	-423071
JAXVILLE	38	5215	-721392	721	463603	253071	-25778
NEWPORT	15	2146	-284760	337	216691	118287	-68069
TOTAL	879	131244	-16686936	15888	10215984	5576688	-6470952

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TABLE D-8
COST IMPLICATIONS-NO RET DEP OUTPATIENTS

UIC	DELTA OPV	DELTA UIC COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	5802	-87030	70	89350	48736	2320
BOSTON	14649	-219735	70	225594	123051	5859
PHILADEL	17011	-255165	70	261969	142892	6804
ANNAPOLS	11736	-176040	70	180734	98582	4694
NMC BETH	0	0	70	0	0	0
AMC PENS	0	0	70	0	0	0
NH GTLK	16937	-254055	70	260829	142270	6774
QUANTICO	5897	-88455	70	90813	49534	2358
BRMERTON	24889	-373335	70	383290	209067	9955
KEY WEST	4400	-66000	70	67760	36960	1760
CCHRISTI	3454	-51810	70	53191	29013	1381
GUAM	3478	-52170	70	53561	29215	1391
CP LEJEN	6225	-93375	70	95865	52290	2490
OAKLAND	46237	-693555	70	712049	388390	18494
NH BETH	39829	-597435	70	613366	334563	15931
NH PENS	24874	-373110	70	383059	208941	9949
NDSBETH	0	0	70	0	0	0
NMS BETH	0	0	70	0	0	0
HCS GTLK	0	0	70	0	0	0
HCS SDGO	0	0	70	0	0	0
NSHABETH	0	0	70	0	0	0
HM1 PENS	0	0	70	0	0	0
MEMPHIS	12399	-185985	70	190944	104151	4959
ST ALBAN	17665	-264975	70	272040	148386	7065
CP PENDL	19368	-290520	70	298267	162691	7747
BEAUFORT	4429	-66435	70	68206	37203	1771
GTMO BAY	1733	-25995	70	26688	14557	693
N LONDON	1988	-29820	70	30615	16699	795
YOKOSUKA	273	-4095	70	4204	2293	109
L BEACH	39958	-599370	70	615353	335647	15983
ROOS RDS	6181	-92715	70	95187	51920	2472
SUBIC PI	614	-9210	70	9455	5157	245
ORLANDO	39401	-591015	70	606775	330968	15760
LEMOORE	1574	-23610	70	24239	13221	629
NAPLES	354	-5310	70	5451	2973	141
PATUXENT	1638	-24570	70	25225	13759	655
PT HUENE	12929	-193935	70	199106	108603	5171
ROTA	369	-5535	70	5682	3099	147
TAIPEI	419	-6285	70	6452	3519	167
PORTS VA	37520	-562800	70	577808	315168	15008
MC SDGO	66554	-998310	70	1024931	559053	26621
CHASTON	12995	-194925	70	200122	109158	5197
JAXVILLE	33597	-503955	70	517393	282214	13438
NEWPORT	6135	-92025	70	94479	51534	2454
TOTAL	543511	-8152665	70	8370052	4565477	217387

COST IMPLICATIONS-NO RET DEP PATIENTS

UIC	DELTA ADMISSIONS	DELTA OP BEDS	DELTA OPV	DELTA UIC COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	196	10	5302	-276870	215378	117532	-61492
BOSTON	529	47	14649	-1111983	565741	308730	-546242
PHILADEL	873	60	17011	-1394205	823308	449315	-570897
ANNAPOLS	231	14	11736	-441816	329267	179663	-112549
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	691	34	16937	-899511	705142	384811	-194369
QUANTICO	181	7	5897	-221343	207196	113065	-14147
BRMERTON	383	19	24889	-734031	629559	343500	-104472
KEY WEST	93	5	4400	-160920	127559	69603	-33361
CCHRISTI	237	10	3454	-241650	205582	112200	-36068
GUAM	137	6	3478	-166074	141652	77302	-24422
CP LEJEN	331	17	6225	-416103	308698	168471	-107405
OAKLAND	1440	74	46237	-2098371	1637969	893830	-460402
NH BETH	1449	102	39829	-2533803	1545073	843162	-988730
NH PENS	450	17	24874	-695838	672409	366891	-23429
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHHBETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	367	19	12399	-546681	426925	232969	-119756
ST ALBAN	417	25	17665	-739575	540171	294753	-199404
CP PENDL	460	29	19368	-841056	594047	324151	-247009
BEAUFORT	147	9	4429	-237291	162727	88800	-74564
GTMO BAY	3	0	1733	-25995	28617	15610	2622
N LONDON	94	3	1988	-86772	91057	49693	4285
YOKOSUKA	17	1	273	-23079	15135	8260	-7944
L BEACH	798	44	39958	-1434666	1128467	615745	-306199
ROOS RDS	159	11	6181	-301539	197424	107729	-104115
SUBIC PI	60	1	614	-28194	48035	26217	19841
ORLANDO	790	20	39401	-970695	1114745	608258	144050
LEMOORE	51	2	1574	-61578	57032	31122	-4546
NAPLES	19	1	354	-24294	17668	9642	-6626
PATUXENT	44	2	1638	-62538	53517	29203	-9021
PT HUENE	207	10	12929	-383775	332207	181260	-51568
RUTA	15	0	369	-5535	15327	8364	9792
THIPEI	24	0	419	-6285	21884	11943	15599
PORTS VA	1512	84	37520	-2157456	1550024	845880	-607432
MC SDGO	1902	103	66554	-2953662	2247917	1226655	-705745
CHASTON	523	40	12995	-954285	536411	292731	-417874
JAXVILLE	721	38	33597	-1225347	980996	535285	-244351
NEWPORT	337	15	6135	-376785	311170	169821	-65615
TOTAL	15888	879	543511	-24839601	18586036	10142165	-6253565

The following nine tables do not include the impact of the proposed $15,000 annual bonus for physicians. The input parameters are listed below.

Navy Marginal Costs
    Continuous Care Operating Bed $ 18,984
    Outpatient Visit $ 15

CHAMPUS Marginal Cost

Inpatient Care	Patient Share Per Case	Government Share Per Case
Dependents of Active Duty	27	732
Retired Personnel	525	774
Dependents of Retired and Deceased Personnel	351	643

Outpatient Care	Patient Share Per OPV	Government Share Per OPV
Dependents of Active Duty	10	20
Retired Personnel	17	24
Dependents of Retired and Deceased Personnel	12	22

Reduction in Demand Due to
Price Elasticity   50%

All calculations are for a six month period.

TABLE D-10

COST IMPLICATIONS-NO DEPENDENT INPATIENTS

UIC	DELTA UP BED	DELTA OBD	DELTA UIC COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	14	2350	-265776	547	400404	14769	134628
BOSTON	34	5125	-645456	681	498492	18387	-146964
PHILADEL	53	8271	-1006152	1083	792756	29241	-213396
ANNAPOLS	11	1201	-208824	292	213744	7884	4920
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	45	7166	-854280	1379	1009428	37233	155148
QUANTICO	25	3514	-474600	771	564372	20817	89772
BRMERTON	25	3496	-474600	872	638304	23544	163704
KEY WEST	18	2278	-341712	558	408456	15066	66744
CCHRISTI	23	2950	-436632	704	515328	19008	78696
GUAM	29	4939	-550536	1066	780312	28782	229776
CP LEJEN	89	12764	-1689576	2785	2038620	75195	349044
OAKLAND	61	8869	-1158024	1658	1213656	44766	55632
NH BETH	95	14467	-1803480	1917	1403244	51759	-400236
NH PENS	29	4600	-550536	1059	775188	28593	224652
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	31	4311	-588504	900	658800	24300	70296
ST ALBAN	8	1434	-151872	191	139812	5157	-12060
CP PENDL	56	7054	-1063104	1487	1088484	40149	25380
BEAUFORT	21	3131	-398664	702	513864	18954	115200
GTMO BAY	8	1005	-151872	245	179340	6615	27468
N LONDON	18	2573	-341712	609	445788	16443	104076
YOKOSUKA	16	2054	-303744	420	307440	11340	3696
L BEACH	26	3388	-493584	656	480192	17712	-13392
ROOS RDS	14	1933	-265776	411	300852	11097	35076
SUBIC PI	18	2746	-341712	555	406260	14985	64548
ORLANDO	13	2878	-246792	627	458964	16929	212172
LEMOORE	20	2397	-379680	648	474336	17496	94656
NAPLES	21	3407	-398664	560	409920	15120	11256
PATUXENT	14	1733	-265776	454	332328	12258	66552
PT HUENE	17	2435	-322728	500	366000	13500	43272
ROTA	17	2205	-322728	477	349164	12879	26436
TAIPEI	23	2954	-436632	590	431880	15930	-4752
PORTS VA	176	26369	-3341184	4915	3597780	132705	256596
MC SDGO	161	23691	-3056424	4619	3381108	124713	324684
CHASTON	73	8106	-1385832	1727	1264164	46629	-121668
JAXVILLE	54	7308	-1025136	1480	1083360	39960	58224
NEWPORT	48	6797	-911232	1579	1155828	42633	244596
TOTAL	1404	202899	-26653536	39724	29077968	1072548	2424432

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TABLE D-11

COST IMPLICATIONS-NO DEPENDENT OUTPATIENTS

UIC	DELTA OPV	DELTA UIC COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	CHAMPUS DELTA COST GOVERNMENT
PORTS NH	15169	-227535	50	151690	75845	-75845
BOSTON	18077	-271155	50	180769	90385	-90386
PHILADEL	30108	-451620	50	301080	150540	-150540
ANNAPOLS	16112	-241680	50	161120	80560	-80560
NMC BETH	0	0	50	0	0	0
AMC PENS	0	0	50	0	0	0
NH GTLK	64376	-965640	50	643760	321880	-321880
QUANTICO	40215	-603225	50	402149	201074	-201076
BRMERTON	53012	-795180	50	530120	265060	-265060
KEY WEST	27905	-418575	50	279049	139525	-139526
CCHRISTI	24768	-371520	50	247680	123840	-123840
GUAM	36451	-546765	50	364509	182254	-182256
CP LEJEN	136875	-2053125	50	1368749	684374	-684376
OAKLND	49305	-739575	50	493049	246524	-246526
NH BETH	100408	-1506120	50	1004080	502040	-502040
NH PENS	81386	-1220790	50	813860	406929	-406930
NUSBETH	0	0	50	0	0	0
NMS BETH	0	0	50	0	0	0
HCS GTLK	0	0	50	0	0	0
HCS SDGO	0	0	50	0	0	0
NSHABETH	0	0	50	0	0	0
AMI PENS	0	0	50	0	0	0
MEMPHIS	42295	-634425	50	422949	211474	-211476
ST ALBAN	15720	-235800	50	157200	78600	-78600
CP PENDL	71890	-1078350	50	718900	359449	-359450
BEAUFORT	31628	-474420	50	316280	158140	-158140
GTMO BAY	8660	-129900	50	86600	43300	-43300
N LONDON	46433	-696495	50	464329	232164	-232166
YOKOSUKA	18199	-272985	50	181989	90995	-90996
L BEACH	65600	-984000	50	656000	328000	-328000
ROOS RDS	14539	-218085	50	145390	72695	-72695
SUBIC PI	17811	-267165	50	178109	89055	-89056
ORLANDO	22349	-335235	50	223489	111745	-111746
LEMOORE	24715	-370725	50	247149	123575	-123576
NAPLES	27083	-406245	50	270829	135415	-135416
PATUXENT	25571	-383565	50	255709	127855	-127856
PT HUENE	23633	-354495	50	236329	118165	-118166
ROTA	22277	-334155	50	222769	111385	-111386
TAIPEI	14615	-219225	50	146150	73075	-73075
PORTS VA	318100	-4771500	50	3180999	1590500	-1590501
MC SDGO	236437	-3546555	50	2364369	1182184	-1182186
CHASTON	84344	-1265160	50	843440	421720	-421720
JAXVILLE	102484	-1537260	50	1024840	512420	-512420
NEWPORT	98328	-1474920	50	983280	491640	-491640
TOTAL	2026878	-30403170	50	20268762	10134381	-10134408

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COST IMPLICATIONS-NO DEPENDENT PATIENTS

UIC	DELTA ADMISSIONS	DELTA OP BEDS	DELTA OPV	DELTA UIC COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	547	14	15169	-493311	552094	90614	58783
BOSTON	681	34	18077	-916611	679261	108772	-237350
PHILADEL	1083	53	30108	-1457772	1093836	179781	-363936
ANNAPOLS	292	11	16112	-450504	374864	88444	-75640
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	1379	45	64376	-1819920	1653188	359113	-166732
QUANTICO	771	25	40215	-1077825	966521	221891	-111304
BRMERTON	872	25	53412	-1269780	1168424	283604	-101356
KEY WEST	538	18	27906	-764297	637505	154591	-72782
C CHRISTI	704	23	24768	-808152	763000	142848	-45144
GUAM	1066	29	36451	-1097301	1144821	211036	47520
CP LEJEN	2785	89	136875	-3742701	3407369	759569	-335332
OAKLAND	1658	61	49305	-1897599	1706705	291290	-190894
NH BETH	1917	95	100408	-3309600	2407324	553799	-902276
NH PENS	1059	29	81386	-1771326	1589048	435522	-182278
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	900	31	42295	-1222929	1081749	235774	-141180
ST ALBAN	191	8	15720	-387672	297012	83757	-90660
CP PENDL	1487	56	71890	-2141454	1807384	399598	-334070
BEAUFORT	702	21	31628	-873084	830144	177094	-42940
GTMO BAY	245	8	8660	-281772	265940	49915	-15832
N LONDON	609	19	46433	-1038207	910117	248607	-128090
YOKUSUKA	420	16	18199	-576729	489429	102335	-87300
L BEACH	656	26	65600	-1477584	1136192	345712	-341392
ROOS RDS	411	14	14539	-483861	446242	83792	-37619
SUBIC PI	555	18	17811	-608877	584369	104040	-24508
ORLANDO	627	13	22349	-582027	682453	128674	100426
LEMOORE	648	20	24715	-750405	721485	141071	-28920
NAPLES	560	21	27083	-804909	680749	150535	-124160
PATUXENT	454	14	25571	-649341	528037	140113	-61304
PT HUENE	500	17	23633	-677223	602329	131665	-74894
ROTA	477	17	22277	-656883	571933	124264	-84950
THAIPEI	590	23	14615	-655857	578030	89005	-77827
PORTS VA	4915	176	318100	-8112684	6778779	1723205	-1333905
MC SDGO	4619	161	236437	-6602979	5745477	1306897	-857502
CHASTON	1727	73	84344	-2650992	2107604	468349	-543388
JAXVILLE	1480	54	102484	-2562396	2108200	552380	-454196
NEWPORT	1579	48	98323	-2386152	2139108	534273	-247044
TOTAL	39724	1404	2026878	-57056706	49346730	11206929	-7709976

COST IMPLICATIONS-NO RETIRED INPATIENTS

U1C	DELTA OP BED	DELTA UBD	DELTA U1C COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	4	714	-75936	88	68112	44440	-7824
BOSTON	58	8761	-1101072	497	384678	250985	-716394
PHILADEL	90	13974	-1708560	617	477558	311585	-1231002
ANNAPOLS	11	1237	-208824	114	88236	57570	-120588
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	45	7126	-854280	469	363006	236845	-491274
QUANTICO	5	792	-94920	96	74304	48480	-20616
BRMERTON	15	2118	-284760	247	191178	124735	-93582
KEY WEST	7	847	-132888	68	52632	34340	-80256
CCHRISTI	9	1244	-170856	138	106812	69690	-64044
GUAM	4	771	-75936	54	41796	27270	-34140
CP LEJEN	16	2382	-303744	195	150930	98475	-152814
OAKLAND	65	9496	-1233960	836	647064	422180	-586896
NH BETH	108	16401	-2050272	1052	814248	531260	-1236024
NH PENS	30	4669	-569520	375	290250	189375	-279270
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHHBETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	14	1910	-265776	166	128484	83830	-137292
ST ALBAN	39	6390	-740376	380	294120	191900	-446256
CP PENDL	28	3565	-531552	301	232974	152005	-298578
BEAUFORT	4	680	-75936	77	59598	38885	-16338
GTMO BAY	0	11	0	3	2322	1515	2322
N LONDON	3	441	-56952	53	41022	26765	-15930
YOKOSUKA	3	431	-56952	17	13158	8585	-43794
L BEACH	53	7974	-1006152	627	485298	316635	-520854
ROOS RDS	4	589	-75936	53	41022	26765	-34914
SUBIC PI	1	169	-18984	20	15480	10100	-3504
ORLANDO	21	4667	-398664	476	368424	240380	-30240
LEMOORE	2	271	-37968	37	28638	18685	-9330
NAPLES	0	35	0	8	6192	4040	6192
PATUXENT	1	126	-18984	20	15480	10100	-3504
PT HUENE	6	892	-113904	82	63468	41410	-50436
ROTA	1	129	-18984	17	13158	8585	-5826
TAIPEI	0	32	0	10	7740	5050	7740
PORTS VA	81	12405	-1537704	996	770904	502980	-766800
MC SDGO	160	23621	-3037440	1801	1393974	909505	-1643466
CHASTON	27	3060	-512568	302	233748	152510	-278820
JAXVILLE	40	5409	-759360	492	380808	248460	-378552
NEWPORT	18	2543	-341712	255	197370	128775	-144342
TOTAL	973	145882	-18471432	11039	8544186	5574695	-9927246

TABLE D-14
COST IMPLICATIONS-NO RETIRED OUTPATIENTS

UIC	DELTA OPV	DELTA UIC COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	2678	-40170	50	32136	22763	-8034
BOSTON	8945	-134175	50	107340	76032	-26835
PHILADEL	12042	-180630	50	144504	102357	-36126
ANNAPOLS	5611	-84165	50	67332	47693	-16833
NMC BETH	0	0	50	0	0	0
AMC PENS	0	0	50	0	0	0
NH GTLK	12498	-187470	50	149976	106233	-37494
QUANTICO	3343	-50145	50	40116	28415	-10029
BRMERTON	13290	-199350	50	159480	112965	-39870
KEY WEST	3172	-47580	50	38064	26962	-9516
CCHRISTI	4961	-74415	50	59532	42168	-14883
GUAM	2001	-30015	50	24012	17000	-6003
CP LEJEN	6759	-101385	50	81108	57451	-20277
OAKLAND	23437	-351555	50	281244	199214	-70311
NH BETH	22031	-330465	50	264372	187263	-66093
NH PENS	15468	-232020	50	185616	131478	-46404
NDSBETH	0	0	50	0	0	0
NMS BETH	0	0	50	0	0	0
HCS GTLK	0	0	50	0	0	0
HCS SDGO	0	0	50	0	0	0
NSHABETH	0	0	50	0	0	0
AMI PENS	0	0	50	0	0	0
MEMPHIS	4621	-69315	50	55452	39278	-13863
ST ALBAN	9585	-143775	50	115020	81472	-28755
CP PENDL	16541	-248115	50	198492	140598	-49623
BEAUFORT	2382	-35730	50	28584	20247	-7146
GTMO BAY	1224	-18360	50	14688	10404	-3672
N LONDON	4102	-61530	50	49224	34867	-12306
YOKOSUKA	729	-10935	50	8748	6196	-2187
L BEACH	25816	-387240	50	309792	219436	-77448
ROOS RDS	1962	-29430	50	23544	16677	-5886
SUBIC PI	1040	-15600	50	12480	8840	-3120
ORLANDO	18091	-271365	50	217092	153773	-54273
LEMOORE	821	-12315	50	9852	6978	-2463
NAPLES	460	-6900	50	5520	3910	-1380
PATUXENT	1342	-20130	50	16104	11407	-4026
PT HUENE	7434	-111510	50	89208	63189	-2302
ROTA	365	-5475	50	4380	3102	-1095
THIPEI	281	-4215	50	3372	2388	-843
PORTS VA	28209	-423135	50	338508	239776	-84627
MC SDGO	47354	-710310	50	568248	402508	-142062
CHASTON	10208	-153120	50	122496	86768	-30624
JAXVILLE	18821	-282315	50	225852	159978	-56463
NEWPORT	6726	-100890	50	80712	57171	-20178
TOTAL	344350	-5165250	50	4132200	2926965	-1033050

TABLE D-15
COST IMPLICATIONS-NO RETIRED PATIENTS

UIC	DELTA ADMISSIONS	DELTA OP BEDS	DELTA OPV	DELTA UIC COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	88	4	2678	-116106	100248	67203	-15858
BOSTON	497	58	8945	-1235247	492018	327017	-743229
PHILADEL	617	90	12042	-1889190	622062	413942	-1267128
ANNAPOLS	114	11	5611	-292989	155568	105263	-137421
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	469	45	12498	-1041750	512382	343078	-528768
QUANTICO	96	5	3343	-145065	114420	76895	-30645
BRMERTON	247	15	13294	-484110	350650	237700	-133452
KEY WEST	66	7	3172	-180468	90696	61302	-39772
CCHRISTI	133	9	4961	-245271	166344	111858	-78927
GUAM	54	4	2001	-105951	65808	44278	-40143
CP LEJEN	195	16	6759	-405129	232038	155926	-173091
OAKLAND	836	65	23437	-1585515	928308	621394	-657207
NH BETH	1052	108	22031	-2380737	1078620	718523	-1302117
NH PENS	375	30	15468	-801540	475366	320853	-325674
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHHBETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	166	14	4621	-335091	183936	123108	-151155
ST ALBAN	380	39	9535	-884151	409140	273372	-475011
CP PENDL	301	28	16541	-779667	431466	292603	-348201
BEAUFORT	77	4	2332	-111666	88182	59132	-23484
GTMO BAY	3	0	1224	-18360	17010	11919	-1350
N LONDON	53	3	4102	-118482	90246	61632	-28236
YOKOSUKA	17	3	729	-67887	21906	14781	-45981
L BEACH	627	53	25816	-1393392	795090	536071	-598302
ROOS RDS	53	4	1962	-105366	64566	43442	-40800
SUBIC PI	20	1	1040	-34584	27960	18940	-6624
ORLANDO	476	21	18091	-670029	585516	394153	-84513
LEMOORE	37	2	821	-50283	38490	25663	-11793
NAPLES	8	0	460	-6900	11712	7950	4812
PATUXENT	20	1	1342	-39114	31584	21507	-7530
PT HUENE	82	6	7434	-225414	152676	104599	-72738
ROTA	17	1	365	-4459	17538	11687	-6921
TAIPEI	10	0	231	-4215	11112	7438	6897
PORTS VA	996	81	28209	-1960839	1109412	742756	-851427
MC SDGO	1801	160	47354	-3747750	1962222	1312013	-1785528
CHASTON	302	27	10208	-665688	356244	239278	-309444
JAXVILLE	492	40	18321	-1041675	606660	408438	-435015
NEWPORT	255	18	6726	-442602	273082	185946	-164520
TOTAL	11039	973	344350	-23636682	12676386	8501660	-10960296

TABLE D-16
COST IMPLICATIONS-NO RET DEP INPATIENTS

U1C	DELTA OP BED	DELTA OBD	DELTA U1C COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	10	1715	-189840	196	126028	68796	-63812
BOSTON	47	7074	-892248	529	340147	185679	-552101
PHILADEL	60	9341	-1139040	873	561339	306423	-577701
ANNAPOLS	14	1549	-265776	231	148533	81081	-117243
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	34	5460	-645456	691	444313	242541	-201143
QUANTICO	7	1048	-132888	181	116383	63531	-16505
BRMERTON	19	2681	-360696	383	246269	134433	-114427
KEY WEST	5	610	-94920	93	59799	32643	-35121
CCHRISTI	10	1324	-189840	237	152391	83187	-37449
GUAM	6	1089	-113904	137	88091	48087	-25813
CP LEJEN	17	2502	-322728	331	212833	116181	-109895
OAKLAND	74	10786	-1404816	1440	925920	505440	-478896
NH BETH	102	15485	-1936368	1449	931707	508599	-1004661
NH PENS	17	2758	-322728	450	289350	157950	-33378
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	19	2672	-360696	367	235981	128817	-124715
ST ALBAN	25	4222	-474600	417	268131	146367	-206469
CP PENDL	29	3676	-550536	460	295780	161460	-254756
BEAUFORT	9	1375	-170856	147	94521	51597	-76335
GTMO BAY	0	10	0	3	1929	1053	1929
N LONDON	3	508	-56952	94	60442	32994	3490
YOKOSUKA	1	182	-18984	17	10931	5967	-8053
L BEACH	44	6545	-835296	798	513114	280098	-322182
ROOS RDS	11	1460	-208824	159	102237	55809	-106587
SUBIC PI	1	234	-18984	60	38580	21060	19596
ORLANDO	20	4490	-379680	790	507970	277290	128290
LEMOORE	2	283	-37968	51	32793	17901	-5175
NAPLES	1	166	-18984	19	12217	6669	-6767
PATUXENT	2	256	-37968	44	28292	15444	-9676
PT HUENE	10	1516	-189840	207	133101	72657	-56739
ROTA	0	82	0	15	9645	5265	9645
TAIPEI	0	122	0	24	15432	8424	15432
PORTS VA	84	12911	-1594656	1512	972216	530712	-622440
MC SDGO	103	15283	-1955352	1902	1222986	667602	-732366
CHASTON	40	4469	-759360	523	336289	183573	-423071
JAXVILLE	38	5215	-721392	721	463603	253071	-257789
NEWPORT	15	2146	-284760	337	216691	118287	-68069
TOTAL	879	131244	-16686936	15888	10215984	5576688	-6470952

TABLE D-17
COST IMPLICATIONS-NO RET DEP OUTPATIENTS

U1C	DELTA OPV	DELTA U1C COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	5802	-87030	50	63822	34812	-23208
BOSTON	14649	-219735	50	161139	87894	-58596
PHILADEL	17011	-255165	50	187120	102066	-68045
ANNAPOLS	11736	-176040	50	129096	70416	-46944
NMC BETH	0	0	50	0	0	0
AMC PENS	0	0	50	0	0	0
NH GTLK	16937	-254055	50	186306	101622	-67749
QUANTICO	5897	-88455	50	64867	35382	-23588
BRMERTON	24889	-373335	50	273778	149334	-99557
KEY WEST	4400	-66000	50	48400	26400	-17600
CCRMISTI	3454	-51810	50	37994	20724	-13816
GUAM	3478	-52170	50	38258	20868	-13912
CP LEJEN	6225	-93375	50	68475	37350	-24900
OAKLAND	46237	-693555	50	508606	277421	-184949
NH BETH	39829	-597435	50	438118	238973	-159317
NH PENS	24874	-373110	50	273613	149244	-99497
NDSBETH	0	0	50	0	0	0
NMS BETH	0	0	50	0	0	0
HCS GTLK	0	0	50	0	0	0
HCS SDGO	0	0	50	0	0	0
NSHABETH	0	0	50	0	0	0
AMI PENS	0	0	50	0	0	0
MEMPHIS	12399	-185985	50	136389	74394	-49596
ST ALBAN	17665	-264975	50	194314	105990	-70661
CP PENDL	19368	-290520	50	213048	116208	-77472
BEAUFORT	4429	-66435	50	48719	26574	-17716
GTMO BAY	1733	-25995	50	19063	10398	-6932
N LONDON	1988	-29820	50	21868	11928	-7952
YOKOSUKA	273	-4095	50	3003	1638	-1092
L BEACH	39958	-599370	50	439537	239748	-159833
ROOS RDS	6181	-92715	50	67991	37086	-24724
SUBIC PI	614	-9210	50	6754	3684	-2456
ORLANDO	39401	-591015	50	433410	236405	-157605
LEMOORE	1574	-23610	50	17314	9444	-6296
NAPLES	354	-5310	50	3894	2124	-1416
PATUXENT	1638	-24570	50	18018	9828	-6552
PT HUENE	12929	-193935	50	142219	77574	-51716
ROTA	369	-5535	50	4059	2214	-1476
THIPEI	419	-6285	50	4609	2514	-1676
PORTS VA	37520	-562800	50	412720	225120	-150080
MC SDGO	66554	-998310	50	732093	399324	-266217
CHASTON	12995	-194925	50	142945	77970	-51980
JAXVILLE	33597	-503955	50	369566	201581	-134389
NEWPORT	6135	-92025	50	67485	36810	-24540
TOTAL	543511	-8152665	50	5978610	3261062	-2174055

TABLE D-18
COST IMPLICATIONS-NO RET DEP PATIENTS

U1C	DELTA ADMISSIONS	DELTA OP BEDS	DELTA OPV	DELTA U1C COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COS GOVERN
PORTS NH	196	10	5802	-276870	189850	103608	-87020
BOSTON	529	47	14649	-1111983	501286	273573	-610697
PHILADEL	873	60	17011	-1394205	748459	408489	-645746
ANNAPOLS	231	14	11736	-441816	277629	151497	-164187
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	691	34	16937	-899511	630619	344163	-268892
QUANTICO	181	7	5897	-221343	181250	98913	-40093
BRMERTON	383	19	24889	-734031	520047	283767	-213984
KEY WEST	93	5	4400	-160920	108199	59043	-52721
CCHRISTI	237	10	3454	-241650	190385	103911	-51265
GUAM	137	6	3478	-166074	126349	68955	-39725
CP LEJEN	331	17	6225	-416103	281308	153531	-134795
OAKLAND	1440	74	46237	-2098371	1434526	782861	-663845
NH BETH	1449	102	39829	-2533803	1369825	747572	-1163978
NH PENS	450	17	24874	-695838	562963	307194	-132875
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	367	19	12399	-546681	372370	203211	-174311
ST ALBAN	417	25	17665	-739575	462445	252357	-277130
CP PENDL	460	29	19368	-841056	508828	277668	-332228
BEAUFORT	147	9	4429	-237291	143240	78171	-94051
GTMO BAY	3	0	1733	-25995	20992	11451	-5003
N LONDON	94	3	1988	-86772	82310	44922	-4462
YOKOSUKA	17	1	273	-23079	13934	7605	-9145
L BEACH	798	44	39958	-1434666	952651	519846	-482015
ROOS RDS	159	11	6181	-301539	170228	92895	-131311
SUBIC PI	60	1	614	-28194	45334	24744	17140
ORLANDO	790	20	39401	-970695	941380	513695	-29315
LEMOORE	51	2	1574	-61578	50107	27345	-11471
NAPLES	19	1	354	-24294	16111	8793	-8183
PHTUXENT	44	2	1633	-62538	46310	25272	-16228
PT HUENE	207	10	12929	-383775	275320	150231	-108455
ROTA	15	0	369	-5535	13704	7479	8169
TAIPEI	24	0	419	-6285	20041	10938	13756
PORTS VA	1512	84	37520	-2157456	1384936	755832	-772520
MC SDGO	1902	103	66554	-2953662	1955079	1066926	-998583
CHASTON	523	40	12995	-954285	479234	261543	-475051
JAXVILLE	721	38	33597	-1225347	833169	454652	-392178
NEWPORT	337	15	6135	-376785	284176	155097	-92609
TOTAL	15888	879	543511	-24839601	16194594	8837750	-8645007

The following nine tables do include the impact of the proposed $15,000 annual bonus for physicians. The input parameters are listed below.

Navy Marginal Costs

Continuous Care Operating Bed	$ 20,502
Outpatient Visit	$ 16

CHAMPUS Marginal Cost

Inpatient Care	Patient Share Per Case	Government Share Per Case
Dependents of Active Duty	27	732
Retired Personnel	252	774
Dependents of Retired and Deceased Personnel	351	643

Outpatient Care	Patient Share Per OPV	Government Share Per OPV
Dependents of Active Duty	10	20
Retired Personnel	17	24
Dependents of Retired and Deceased Personnel	12	22

Reduction in Demand Due to Price Elasticity	30%

All calculations are for a six month period.

TABLE D-19

COST IMPLICATIONS-NO DEPENDENT INPATIENTS

UIC	DELTA OF BED	DELTA OBD	DELTA UIC COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	14	2350	-287028	547	400404	14769	113376
BOSTON	34	5125	-697068	681	498492	18387	-198576
PHILADEL	53	8271	-1086606	1083	792756	29241	-293850
ANNAPOLS	11	1201	-225522	292	213744	7884	-11778
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	45	7166	-922590	1379	1009428	37233	86838
QUANTICO	25	3514	-512550	771	564372	20817	51022
BRMERTON	25	3496	-512550	872	638304	23544	125754
KEY WEST	18	2278	-369036	558	408456	15066	39420
CCHRISTI	23	2450	-471546	704	515328	19008	43782
GUAM	29	4939	-594558	1066	780312	28782	185754
CP LEJEN	89	12764	-1824678	2785	2038620	75195	213942
OAKLAND	61	8869	-1250622	1658	1213656	44766	-36966
NH BETH	95	14467	-1947690	1917	1403244	51759	-544446
NH PENS	29	4600	-594558	1059	775188	28593	180630
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHHBETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	31	4311	-635562	900	658800	24300	23238
ST ALBAN	8	1434	-164016	191	139812	5157	-24204
CP PENDL	56	7054	-1148112	1487	1088484	40149	-59628
BEAUFORT	21	3131	-430542	702	513864	18954	83322
GTMO BAY	8	1005	-164016	245	179340	6615	15324
N LONDON	18	2573	-369036	609	445788	16443	76752
YOKOSUKA	16	2054	-328032	420	307440	11340	-20592
L BEACH	26	3888	-533052	656	480192	17712	-52860
ROOS RDS	14	1933	-287028	411	300852	11097	13824
SUBIC PI	18	2746	-369036	555	406260	14985	37224
ORLANDO	13	2878	-266526	627	458964	16929	192438
LEMOORE	20	2397	-410040	648	474336	17496	64296
NAPLES	21	3407	-430542	560	409920	15120	-20622
PATUXENT	14	1733	-287028	454	332328	12258	45300
PT HUENE	17	2435	-348534	500	366000	13500	17466
ROTA	17	2205	-348534	477	349164	12879	630
THIPEI	23	2954	-471546	590	431880	15930	-39666
PORTS VA	176	26869	-3600352	4915	3597780	132705	-10572
MC SDGO	161	23691	-3300822	4619	3381108	124713	80286
CHASTON	73	8106	-1496646	1727	1264164	46629	-232482
JAXVILLE	54	7308	-1107108	1480	1083360	39960	-23748
NEWPORT	48	6797	-984096	1579	1155828	42633	171732
TOTAL	1404	202899	-28784808	39724	29077968	1072548	293160

TABLE D-20
COST IMPLICATIONS-NO DEPENDENT OUTPATIENTS

U1C	DELTA OPV	DELTA U1C COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	15169	-242704	70	212365	106183	-30339
BOSTON	18077	-289232	70	253077	126539	-36155
PHILADEL	30108	-481728	70	421512	210756	-60216
ANNAPOLS	16112	-257792	70	225568	112784	-32224
NMC BETH	0	0	70	0	0	0
AMC PENS	0	0	70	0	0	0
NH GTLK	64376	-1030016	70	901264	450632	-128752
QUANTICO	40215	-643440	70	563009	281504	-80431
BRMERTON	53012	-848192	70	742168	371084	-106024
KEY WEST	27905	-446480	70	390669	195334	-55811
CCHRISTI	24768	-396288	70	346752	173376	-49536
GUAM	36451	-583216	70	510313	255156	-72903
CP LEJEN	136875	-2190000	70	1916249	958124	-273751
OAKLAND	49305	-788880	70	690269	345134	-98611
NH BETH	100408	-1606528	70	1405712	702856	-200816
NH PENS	81386	-1302176	70	1139404	569701	-162772
NDSBETH	0	0	70	0	0	0
NMS BETH	0	0	70	0	0	0
HCS GTLK	0	0	70	0	0	0
HCS SDGO	0	0	70	0	0	0
NSHABETH	0	0	70	0	0	0
AMI PENS	0	0	70	0	0	0
MEMPHIS	42295	-676720	70	592129	296064	-84591
ST ALBAN	15720	-251520	70	220080	110040	-31440
CP PENDL	71890	-1150240	70	1006460	503229	-143780
BEAUFORT	31628	-506048	70	442792	221396	-63256
GTMO BAY	8660	-138560	70	121240	60620	-17320
N LONDON	46433	-742928	70	650061	325030	-92867
YOKOSUKA	18199	-291184	70	254785	127393	-36399
L BEACH	65600	-1049600	70	918400	459200	-131200
ROOS RDS	14539	-232624	70	203545	101773	-29079
SUBIC PI	17811	-284976	70	249353	124677	-35623
ORLANDO	22349	-357584	70	312885	156443	-44699
LEMOORE	24715	-395440	70	346009	173004	-49431
NAPLES	27083	-433328	70	379161	189580	-54167
PATUXENT	25571	-409136	70	357993	178996	-51143
PT HUENE	23633	-378128	70	330861	165431	-47267
ROTA	22277	-356432	70	311877	155939	-44555
TAIPEI	14615	-233840	70	204609	102305	-29231
PORTS VA	318100	-5089600	70	4453399	2226700	-636201
MC SDGO	236437	-3782992	70	3310115	1655058	-472877
CHASTON	84344	-1349504	70	1180816	590408	-168688
JAXVILLE	102484	-1639744	70	1434776	717388	-204968
NEWPORT	98328	-1573248	70	1376592	688296	-196656
TOTAL	2026878	-32430048	70	28376269	14188133	-4053779

TABLE D-21
COST IMPLICATIONS-NO DEPENDENT PATIENTS

U1C	DELTA ADMISSIONS	DELTA OP BEDS	DELTA OPV	DELTA U1C COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	547	14	15169	-529732	612769	120952	83037
BOSTON	681	34	18077	-986300	751569	144926	-234731
PHILADEL	1083	53	30108	-1568334	1214268	239997	-354066
ANNAPOLS	292	11	16112	-483314	439312	120668	-44002
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	1379	45	64376	-1952606	1910692	487865	-41914
QUANTICO	771	25	40215	-1155990	1127381	302321	-28609
BRMERTON	872	25	53012	-1360742	1380472	394628	19730
KEY WEST	558	18	27905	-415516	799125	210400	-16391
CCHRISTI	704	23	24768	-867834	862080	192384	-5754
GUAM	1066	29	36451	-1177774	1290625	283938	112851
CP LEJEN	2785	89	136875	-4014678	3954869	1033319	-59809
OAKLAND	1658	61	49305	-2039502	1903925	389900	-135577
NH BETH	1917	95	100408	-3554218	2808956	754615	-745262
NH PENS	1059	29	81386	-1896734	1914592	598294	17858
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AM1 PENS	0	0	0	0	0	0	0
MEMPHIS	900	31	42295	-1312282	1250929	320364	-61353
ST ALBAN	191	8	15720	-415536	359892	115197	-55644
CP PENDL	1487	56	71890	-2298352	2094944	543378	-203408
BEAUFORT	702	21	31628	-936590	956656	240350	20066
GTMO BAY	245	8	8660	-302576	300580	67235	-1996
N LONDON	609	18	46433	-1111964	1095849	341473	-16115
YOKOSUKA	420	16	18199	-619216	562225	138733	-56991
L BEACH	656	26	65600	-1582652	1398592	476912	-184060
ROOS RDS	411	14	14539	-519652	504397	112870	-15255
SUBIC PI	555	18	17811	-654012	655613	139662	1601
ORLANDO	627	13	22349	-624110	771049	173372	147739
LEMOORE	648	20	24715	-805480	820345	190500	14865
NAPLES	560	21	27083	-863870	789081	204700	-74789
PATUXENT	454	14	25571	-696164	690321	191254	-5843
PT HUENE	500	17	23633	-726662	696861	178931	-29801
ROTA	477	17	22277	-704966	661041	168818	-43925
TAIPEI	590	23	14615	-705386	636489	118235	-68897
PORTS VA	4915	176	318100	-8697952	8051179	2359405	-646773
MC SDGO	4619	161	236437	-7083314	6691223	1779771	-392591
CHASTON	1727	73	84344	-2846150	2444980	637037	-401170
JAXVILLE	1480	54	102484	-2746852	2518136	757348	-228716
NEWPORT	1579	48	98328	-2557344	2532420	730929	-24924
TOTAL	39724	1404	2026878	-61214856	57454237	15260681	-3760619

TABLE D-22
COST IMPLICATIONS-NO RETIRED INPATIENTS

UIC	DELTA OP BED	DELTA OBD	DELTA UIC COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	4	714	-82008	88	68112	44440	-13896
BOSTON	58	8761	-1189116	497	384678	250985	-804438
PHILADEL	90	13974	-1845180	617	477558	311585	-1367622
ANNAPOLS	11	1237	-225522	114	88236	57570	-137286
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	45	7126	-922590	469	363006	236845	-559584
QUANTICO	5	792	-102510	96	74304	48480	-28206
BRMERTON	15	2118	-307530	247	191178	124735	-116352
KEY WEST	7	847	-143514	68	52632	34340	-90882
CCHRISTI	9	1244	-184518	138	106812	69690	-77706
GUAM	4	771	-82008	54	41796	27270	-40212
CP LEJEN	16	2382	-328032	195	150930	98475	-177102
OAKLAND	65	9496	-1332630	836	647064	422180	-685566
NH BETH	108	16401	-2214216	1052	814248	531260	-1399968
NH PENS	30	4669	-615060	375	290250	189375	-324810
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	14	1910	-287028	166	128484	83830	-158544
ST ALBAN	39	6390	-799578	380	294120	191900	-505458
CP PENDL	28	3565	-574056	301	232974	152005	-341082
BEAUFORT	4	680	-82008	77	59598	38885	-22410
GTMO BAY	0	11	0	3	2322	1515	2322
N LONDON	3	441	-61506	53	41022	26765	-20484
YOKOSUKA	3	431	-61506	17	13158	8585	-48348
L BEACH	53	7974	-1086606	627	485298	316635	-601308
ROOS RDS	4	589	-82008	53	41022	26765	-40986
SUBIC PI	1	169	-20502	20	15480	10100	-5022
ORLANDO	21	4667	-430542	476	368424	240380	-62118
LEMOORE	2	271	-41004	37	28638	18685	-12366
NAPLES	0	35	0	8	6192	4040	6192
PATUXENT	1	126	-20502	20	15480	10100	-5022
PT HUENE	6	892	-123012	82	63468	41410	-59544
RUTA	1	129	-20502	17	13158	8585	-7344
THIPEI	0	32	0	10	7740	5050	7740
PORTS VA	81	12405	-1660662	996	770904	502980	-889758
MC SDGO	160	23621	-3280320	1801	1393974	909505	-1886346
CHASTON	27	3060	-553554	302	233748	152510	-319806
JAXVILLE	40	5409	-820080	492	380808	248460	-439272
NEWPORT	18	2543	-369036	255	197370	128775	-171666
TOTAL	973	145882	-19948446	11039	8544186	5574695	-11404260

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COST IMPLICATIONS-NO RETIRED OUTPATIENTS

UIC	DELTA OPV	DELTA UIC COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	2678	-42848	70	44990	31868	2142
BOSTON	8945	-143120	70	150276	106445	7156
PHILADEL	12042	-192672	70	202305	143299	9633
ANNAPOLS	5611	-89776	70	94264	66770	4488
NMC BETH	0	0	70	0	0	0
HMC PENS	0	0	70	0	0	0
NH GTLK	12498	-199968	70	209966	148726	9998
QUANTICO	3343	-53488	70	56162	39781	2674
BRMERTON	13290	-212640	70	223272	158151	10632
KEY WEST	3172	-50752	70	53289	37746	2537
CCHRISTI	4961	-79376	70	83344	59035	3968
GUAM	2001	-32016	70	33616	23811	1600
CP LEJEN	6759	-108144	70	113551	80432	5407
OAKLAND	23437	-374992	70	393741	278900	18749
NH BETH	22031	-352496	70	370120	262168	17624
NH PENS	15468	-247488	70	259862	184069	12374
NDSBETH	0	0	70	0	0	0
NMS BETH	0	0	70	0	0	0
HCS GTLK	0	0	70	0	0	0
HCS SDGO	0	0	70	0	0	0
NSHHBETH	0	0	70	0	0	0
AMI PENS	0	0	70	0	0	0
MEMPHIS	4621	-73936	70	77632	54989	3696
ST ALBAN	9585	-153360	70	161028	114061	7668
CP PENDL	16541	-264656	70	277888	196837	13232
BEAUFORT	2382	-38112	70	40017	28345	1905
GTMO BAY	1224	-19584	70	20563	14565	979
N LONDON	4102	-65632	70	68913	48813	3281
YUKOSUKA	729	-11664	70	12247	8675	583
L BEACH	25816	-413056	70	433708	307210	20652
ROOS RDS	1962	-31392	70	32961	23347	1569
SUBIC PI	1040	-16640	70	17472	12376	832
ORLANDO	18091	-289456	70	303928	215232	14472
LEMOORE	821	-13136	70	13792	9769	656
NAPLES	460	-7360	70	7728	5474	368
PATUXENT	1342	-21472	70	22545	15969	1073
PT HUENE	7434	-118944	70	124891	88464	5947
ROTA	365	-5840	70	6132	4343	292
TAIPEI	281	-4496	70	4720	3343	224
PORTS VA	28209	-451344	70	473911	335687	22567
MC SDGO	47354	-757664	70	795547	563512	37883
CHASTON	10208	-163328	70	171494	121475	8166
JAXVILLE	18821	-301136	70	316192	223969	15056
NEWPORT	6726	-107616	70	112996	80039	5380
TOTAL	344350	-5509600	70	5785063	4097745	275463

TABLE D-24
COST IMPLICATIONS-NO RETIRED PATIENTS

U1C	DELTA ADMISSIONS	DELTA OP BEDS	DELTA OPV	DELTA U1C COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	88	4	2678	-124856	113102	76308	-11754
BOSTON	497	58	8945	-332236	534954	357430	-797282
PHILADEL	617	90	12042	-2037852	679863	454884	-1357989
ANNAPOLS	114	11	5611	-315298	182500	124340	-132798
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	469	45	12498	-1122558	572972	385571	-549586
QUANTICO	96	5	3343	-155998	130466	88261	-25532
BRMERTON	247	15	13290	-520170	414450	282886	-105720
KEY WEST	68	7	3172	-194266	105921	72086	-88345
CCHRISTI	138	9	4961	-263894	190156	128725	-73738
GUAM	54	4	2001	-114024	75412	51081	-38612
CP LEJEN	195	16	6759	-436176	264481	178907	-171695
OAKLAND	836	65	23437	-1707622	1040805	701080	-666817
NH BETH	1052	108	22031	-2566712	1184368	793428	-1382344
NH PENS	375	30	15468	-862548	550112	373444	-312436
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
HMI PENS	0	0	0	0	0	0	0
MEMPHIS	166	14	4621	-360964	206116	138819	-154848
ST ALBAN	380	39	9585	-952938	455148	305961	-497790
CP PENDL	301	28	16541	-838712	510862	348342	-327850
BEAUFORT	77	4	2382	-120120	99615	67230	-20505
GTMO BAY	3	0	1224	-19584	22885	16080	3301
N LONDON	53	3	4102	-127138	109935	75578	-17203
YOKUSUKA	17	3	729	-73170	25405	17260	-47765
L BEACH	627	53	25816	-1499662	919006	623845	-580656
ROOS RDS	53	4	1962	-113400	73983	50112	-39417
SUBIC P1	20	1	1040	-37142	32952	22476	-4190
ORLANDO	476	21	18091	-719998	672352	455662	-47646
LEMOORE	37	2	821	-54140	42430	28454	-11710
NAPLES	8	0	460	-7360	13920	9514	6560
PHTUXENT	20	1	1342	-41974	38025	26069	-3949
PT HUENE	82	6	7434	-241956	188359	129874	-53597
ROTA	17	1	365	-26342	19290	12928	-7052
TAIPEI	10	0	281	-4496	12460	8393	7964
PORTS VA	996	81	23209	-2112006	1244815	838667	-367191
MC SDGO	1801	160	47354	-4037984	2189521	1473017	-1848463
CHASTON	302	27	10208	-716882	405242	273985	-311640
JAXVILLE	492	40	18821	-1121216	697000	472429	-424216
NEWPORT	255	18	6726	-476652	310366	208814	-166286
TOTAL	11039	973	344350	-25458046	14329249	9672440	-11128797

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TABLE D-25
COST IMPLICATIONS-NO RET DEP INPATIENTS

U1C	DELTA OP BED	DELTA OBD	DELTA U1C COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	10	1715	-205020	196	126028	68796	-78992
BOSTON	47	7074	-963594	529	340147	185679	-623447
PHILADEL	60	9341	-1230120	873	561339	306423	-668781
ANNAPOLS	14	1548	-287028	231	148533	81081	-138495
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	34	5460	-697068	691	444313	242541	-252755
QUANTICO	7	1048	-143514	181	116383	63531	-27131
BRMERTON	19	2681	-389538	383	246269	134433	-143269
KEY WEST	5	610	-102510	93	59799	32643	-42711
CCHRISTI	10	1324	-205020	237	152391	83187	-52629
GUAM	6	1089	-123012	137	88091	48087	-34921
CP LEJEN	17	2502	-348534	331	212833	116181	-135701
OAKLAND	74	10786	-1517148	1440	925920	505440	-591228
NH BETH	102	15485	-2091204	1449	931707	508599	-1159497
NH PENS	17	2758	-348534	450	289350	157950	-59184
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AM1 PENS	0	0	0	0	0	0	0
MEMPHIS	19	2672	-389538	367	235981	128817	-153557
ST ALBAN	25	4222	-512550	417	268131	146367	-244419
CP PENDL	29	3676	-594558	460	295780	161460	-298778
BEAUFORT	9	1375	-184518	147	94521	51597	-89997
GTMO BAY	0	10	0	3	1929	1053	1929
N LONDON	3	508	-61506	94	60442	32994	-1064
YOKOSUKA	1	182	-20502	17	10931	5967	-9571
L BEACH	44	6545	-902088	798	513114	280098	-388974
ROOS RDS	11	1460	-225522	159	102237	55809	-123285
SUBIC PI	1	234	-20502	60	38580	21060	18078
ORLANDO	20	4490	-410040	790	507970	277290	97930
LEMOORE	2	283	-41004	51	32793	17901	-8211
NAPLES	1	166	-20502	19	12217	6669	-8285
PATUXENT	2	256	-41004	44	28292	15444	-12712
PT HUENE	10	1516	-205020	207	133101	72657	-71919
ROTA	0	82	0	15	9645	5265	9645
THIPEI	0	122	0	24	15432	8424	15432
PORTS VA	84	12911	-1722168	1512	972216	530712	-749952
MC SDGO	103	15283	-2111706	1902	1222986	667602	-888720
CHASTON	40	4469	-820080	523	336289	183573	-483791
JAXVILLE	38	5215	-779076	721	463603	253071	-315473
NEWPORT	15	2146	-307530	337	216691	118287	-90839
TOTAL	879	131244	-18021258	15888	10215984	5576688	-7805274

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TABLE D-29
COST IMPLICATIONS-NO DEPENDENT OUTPATIENTS

UIC	DELTA OPV	DELTA UIC COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	15169	-242704	50	151690	75845	-91014
BOSTON	18077	-289232	50	180769	90385	-108463
PHILADEL	30108	-481728	50	301080	150540	-180648
ANNAPOLS	16112	-257792	50	161120	80560	-96672
NMC BETH	0	0	50	0	0	0
AMC PENS	0	0	50	0	0	0
NH GTLK	64376	-1030016	50	643760	321880	-386256
QUANTICO	40215	-643440	50	402149	201074	-241291
BRMERTON	53012	-848192	50	530120	265060	-318072
KEY WEST	27905	-446480	50	279049	139525	-167431
CCHRISTI	24768	-396288	50	247680	123840	-148608
GUAM	36451	-583216	50	364509	182254	-218707
CP LEJEN	136875	-2190000	50	1368749	684374	-821251
OAKLAND	49305	-788880	50	493049	246524	-295831
NH BETH	100408	-1606528	50	1004080	502040	-602448
NH PENS	81386	-1302176	50	813860	406929	-488316
NDSBETH	0	0	50	0	0	0
NMS BETH	0	0	50	0	0	0
HCS GTLK	0	0	50	0	0	0
HCS SUGO	0	0	50	0	0	0
NSHABETH	0	0	50	0	0	0
AMI PENS	0	0	50	0	0	0
MEMPHIS	42295	-676720	50	422949	211474	-253771
ST ALBAN	15720	-251520	50	157200	78600	-94320
CP PENDL	71890	-1150240	50	718900	359449	-431340
BEAUFORT	31628	-506048	50	316280	158140	-189768
GTMO BAY	8660	-138560	50	86600	43300	-51960
N LONDON	46433	-742928	50	464329	232164	-278599
YOKOSUKA	18199	-291184	50	181989	90995	-109195
L BEACH	65600	-1049600	50	656000	328000	-393600
ROOS RDS	14539	-232624	50	145390	72695	-87234
SUBIC PI	17811	-284976	50	178109	89055	-106867
ORLANDO	22349	-357584	50	223489	111745	-134095
LEMOORE	24715	-395440	50	247149	123575	-148291
NAPLES	27083	-433328	50	270829	135415	-162499
PATUXENT	25571	-409136	50	255709	127855	-153427
PT HUENE	23633	-378128	50	236329	118165	-141799
ROTA	22277	-356432	50	222769	111385	-133663
TAIPEI	14615	-233840	50	146150	73075	-87690
PORTS VA	318100	-5089600	50	3180999	1590500	-1908601
MC SDGO	236437	-3782992	50	2364369	1182184	-1418623
CHASTON	84344	-1349504	50	843440	421720	-506064
JAXVILLE	102484	-1639744	50	1024840	512420	-614904
NEWPORT	98328	-1573248	50	983280	491640	-589968
TOTAL	2026878	-32430048	50	20268762	10134381	-12161286

TABLE D-30
COST IMPLICATIONS-NO DEPENDENT PATIENTS

U1C	DELTA ADMISSIONS	DELTA OP BEDS	DELTA OPV	DELTA U1C COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	547	14	15169	-529732	552094	90614	22362
BOSTON	681	34	18077	-936300	679261	108772	-307039
PHILADEL	1083	53	30108	-1568334	1093836	179781	-474498
ANNAPOLS	292	11	16112	-483314	374864	88444	-108450
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	1379	45	64376	-1952606	1653188	359113	-299418
QUANTICO	771	25	40215	-1155990	946521	221891	-189469
BRMERTON	872	25	53012	-1360742	1168434	288604	-192318
KEY WEST	558	18	27905	-815516	687505	154591	-128011
CCHRISTI	704	23	24768	-867834	763008	142848	-104826
GUAM	1066	29	36451	-1177774	1144821	211036	-32953
CP LEJEN	2785	89	136875	-4014678	3407369	759569	-607309
OAKLAND	1658	61	49305	-2039502	1706705	291290	-332797
NH BETH	1917	95	100408	-3554218	2407324	553799	-1146894
NH PENS	1059	29	81386	-1896734	1589048	435522	-307686
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	900	31	42295	-1312282	1081749	235774	-230533
ST ALBAN	191	8	15720	-415536	297012	83757	-118524
CP PENDL	1487	56	71890	-2298352	1307384	399598	-490968
BEAUFORT	702	21	31628	-936590	830144	177094	-106446
GTMO BAY	245	8	8660	-302576	265940	49915	-36636
N LONDON	609	18	46433	-1111964	910117	248607	-201847
YOKOSUKA	420	16	18199	-619216	489429	102335	-129787
L BEACH	656	26	65600	-1582652	1136192	345712	-446460
ROOS RDS	411	14	14539	-519652	446242	83792	-73410
SUBIC PI	555	18	17811	-654012	584369	104040	-69643
ORLANDO	627	13	22349	-624110	682453	128674	58343
LEMOORE	648	20	24715	-805480	721485	141071	-83995
NAPLES	560	21	27083	-863870	680749	150535	-183121
PATUXENT	454	14	25571	-696164	588037	140113	-108127
PT HUENE	500	17	23633	-726662	602329	131665	-124333
ROTA	477	17	22277	-704966	571933	124264	-133033
TAIPEI	590	23	14615	-705386	578030	89005	-127356
PORTS VA	4915	176	318100	-8697952	6778779	1723205	-1919173
MC SDGO	4619	161	236437	-7083814	5745477	1306897	-1338337
CHASTON	1727	73	84344	-2846150	2107604	468349	-738546
JAXVILLE	1480	54	102484	-2746852	2108200	552380	-638852
NEWPORT	1579	48	98328	-2557344	2139108	534273	-418236
TOTAL	39724	1404	2026878	-61214856	49346730	11206929	-11868126

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TABLE D-31
COST IMPLICATIONS-NO RETIRED INPATIENTS

U1C	DELTA OP BED	DELTA OBD	DELTA U1C COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	4	714	-82008	88	68112	44440	-13896
BOSTON	58	8761	-1189116	497	384678	250985	-804438
PHILADEL	90	13974	-1845180	617	477558	311585	-1367622
ANNAPOLS	11	1237	-225522	114	88236	57570	-137286
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	45	7126	-922590	469	363006	236845	-559584
QUANTICO	5	742	-102510	96	74304	48480	-28206
BREMERTON	15	2118	-307500	247	191178	124735	-116352
KEY WEST	7	1047	-143514	68	52632	34340	-90882
CCHRISTI	9	1244	-184518	138	106812	69690	-77706
GUAM	4	771	-82008	54	41796	27270	-40212
CP LEJEN	16	2382	-328032	195	150930	98475	-177102
OAKLAND	65	9496	-1332630	836	647064	422180	-685566
NH BETH	108	16401	-2214216	1052	814248	531260	-1399968
NH PENS	30	4669	-615060	375	290250	189375	-324810
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	14	1910	-237023	166	128484	83830	-158544
ST ALBAN	39	6390	-799578	380	294120	191900	-505458
CP PENDL	28	3565	-574056	301	232974	152005	-341082
BEAUFORT	4	680	-82008	77	59598	38885	-22410
GTMO BAY	0	11	0	3	2322	1515	2322
N LONDON	3	441	-61506	53	41022	26765	-20484
YOKOSUKA	3	431	-1506	17	13158	8585	-48348
L BEACH	53	7974	-1086606	627	485298	316635	-601308
ROOS RDS	4	589	-82008	53	41022	26765	-40986
SUBIC PI	1	169	-20502	20	15480	10100	-5022
ORLANDO	21	4667	-430542	476	368424	240380	-62118
LEMOORE	2	271	-41004	37	28638	18685	-12366
NAPLES	0	35	0	8	6192	4040	6192
PATUXENT	1	126	-20502	20	15480	10100	-5022
PT HUENE	6	892	-123012	82	63468	41410	-59544
ROTA	1	129	-20502	17	13158	8585	-7344
THIPEI	0	32	0	10	7740	5050	7740
PORTS VA	81	12405	-1660662	996	770904	502980	-889758
MC SDGO	160	23621	-3280320	1801	1393974	909505	-1886346
CHASTON	27	3060	-553554	302	233748	152510	-319806
JAXVILLE	40	5409	-820080	492	380808	248460	-439272
NEWPORT	18	2543	-369036	255	197370	128775	-171666
TOTAL	973	145882	-19948446	11039	8544186	5574695	-11404260

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TABLE D-32
COST IMPLICATIONS-NO RETIRED OUTPATIENTS

U1C	DELTA OPV	DELTA U1C COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	2678	-42848	50	32136	22763	-10712
BOSTON	8945	-143120	50	107340	76032	-35780
PHILADEL	12042	-192672	50	144504	102357	-48168
ANNAPOLS	5611	-89776	50	67332	47693	-22444
NMC BETH	0	0	50	0	0	0
AMC PENS	0	0	50	0	0	0
NH GTLK	12498	-199968	50	149976	106233	-49992
QUANTICO	3343	-53488	50	40116	28415	-13372
BRMERTON	13290	-212640	50	159480	112945	-53160
KEY WEST	3172	-50752	50	38064	26962	-12688
CCHRISTI	4961	-79376	50	59532	42168	-19844
GUAM	2001	-32016	50	24012	17008	-8004
CP LEJEN	6759	-108144	50	81108	57451	-27036
OAKLAND	23437	-374992	50	281244	199214	-93748
NH BETH	22031	-352496	50	264372	187263	-88124
NH PENS	15468	-247488	50	185616	131478	-61872
NDSBETH	0	0	50	0	0	0
NMS BETH	0	0	50	0	0	0
HCS GTLK	0	0	50	0	0	0
HCS SDGO	0	0	50	0	0	0
NSHHBETH	0	0	50	0	0	0
AMI PENS	0	0	50	0	0	0
MEMPHIS	4621	-73936	50	55452	39278	-18484
ST ALBAN	9585	-153360	50	115020	81472	-38340
CP PENDL	16541	-264656	50	198492	140598	-66164
BEAUFORT	2382	-38112	50	28584	20247	-9528
GTMO BAY	1224	-19584	50	14688	10404	-896
N LONDON	4102	-65632	50	49224	34867	-16408
YOKOSUKA	729	-11664	50	8748	6196	-2916
L BEACH	25816	-413056	50	309792	219436	-103264
ROOS RDS	1962	-31392	50	23544	16677	-7848
SUBIC PI	1040	-16640	50	12480	8840	-4160
ORLANDO	18091	-289456	50	217092	153773	-72364
LEMOORE	821	-13136	50	9852	6978	-3284
NHPLES	460	-7360	50	5520	3910	-1840
PATUXENT	1342	-21472	50	16104	11407	-5368
PT HUENE	7434	-118944	50	89208	63189	-29736
ROTA	365	-5840	50	4380	3102	-1460
TAIPEI	281	-4496	50	3372	2388	-1124
PORTS VH	28209	-451344	50	338508	239776	-112836
MC SDGO	47354	-757664	50	568248	402508	-189416
CHASTON	10208	-163328	50	122496	86768	-40832
JAXVILLE	18821	-301136	50	225852	159978	-75284
NEWPORT	6726	-107616	50	80712	57171	-26904
TOTAL	344350	-5509600	50	4132200	2926965	-1377400

TABLE D-33
COST IMPLICATIONS-NO RETIRED PATIENTS

UIC	DELTA ADMISSIONS	DELTA OP BEDS	DELTA OPV	DELTA UIC COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	88	4	2678	-124856	100248	67203	-24608
BOSTON	497	58	8945	-1332236	492018	327017	-840218
PHILADEL	617	90	12042	-2037852	622062	413942	-1415790
ANNAPOLS	114	11	5611	-315298	155568	105263	-159730
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	469	45	12498	-1122558	512982	33078	-609576
QUANTICO	96	5	3343	-155998	114420	76895	-41578
BRMERTON	247	15	13290	-520170	350658	237700	-169512
KEY WEST	68	7	3172	-194266	90696	61302	-103570
CCHRISTI	133	9	4961	-263394	166344	111858	-97550
GUAM	54	4	2001	-114024	65808	44278	-48216
CP LEJEN	195	16	6759	-436176	232038	155926	-204138
OAKLAND	836	65	23437	-1707622	920308	621394	-779314
NH BETH	1052	108	22031	-2566712	1078620	718523	-1488092
NH PENS	375	30	15468	-862548	475866	320853	-386682
NISBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	166	14	4621	-360964	183936	123108	-177028
ST ALBAN	380	39	9585	-952938	409140	273372	-543798
CP PENDL	301	28	16541	-38712	431466	292603	-407246
BEAUFORT	77	4	2332	-120120	88182	59132	-31938
GTMO BAY	3	0	1224	-19584	17010	11919	-2574
N LONDON	53	3	4102	-127138	90246	61632	-36892
YOKOSUKA	17	3	729	-73170	21906	14781	-51264
L BEACH	627	53	25816	-1499662	795090	536071	-704572
ROOS RDS	53	4	1962	-113400	64566	43442	-48834
SUBIC PI	20	1	1040	-37142	27960	18940	-9182
ORLANDO	476	21	18091	-719998	585516	394153	-134482
LEMOORE	37	2	321	-54140	38490	25663	-15650
NAPLES	3	0	460	-7360	11712	7950	4352
PATUXENT	20	1	1342	-41974	31584	21507	-10390
PT HUENE	82	6	7434	-241956	152676	104599	-89280
ROTA	17	1	365	-26342	17538	11687	-8804
TAIPEI	10	0	281	-4496	11112	7438	6616
PORTS VA	996	81	28209	-2112006	1109412	742756	-1002594
MC SDGO	1801	160	47354	-4037984	1962222	1312013	-2075762
CHASTON	302	27	10208	-716882	356244	239278	-360638
JAXVILLE	492	40	18821	-1121216	606660	408438	-514556
NEWPORT	255	18	6726	-476652	273082	185946	-198570
TOTAL	11039	973	344350	-25458046	12676386	8501660	-12781660

TABLE D-34
COST IMPLICATIONS-NO RET DEP INPATIENTS

UIC	DELTA OP BED	DELTA OBD	DELTA UIC COST	CHAMPUS CASES	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	10	1715	-205020	196	126023	68796	-78992
BOSTON	47	7074	-963594	529	340147	185679	-623447
PHILADEL	60	9341	-1230120	873	561339	306423	-668781
ANNAPOLS	14	1548	-287028	231	148533	81081	-138495
NMC BETH	0	0	0	0	0	0	0
HMC PENS	0	0	0	0	0	0	0
NH GTLK	34	5460	-697063	691	444313	242541	-252755
QUANTICO	7	1048	-143514	181	116383	63531	-27131
BRMERTON	19	2681	-389538	383	246269	134433	-143269
KEY WEST	5	610	-102510	93	59799	32643	-42711
CCHRISTI	10	1324	-205020	237	152391	83187	-52629
GUAM	6	1089	-123012	137	88091	48087	-34921
CP LEJEN	17	2502	-348534	331	212333	116181	-135701
OAKLAND	74	10786	-1517148	1440	925920	505440	-591228
NH BETH	102	15485	-2091204	1449	931707	508599	-1159497
NH PENS	17	2758	-348534	450	289350	157950	-59184
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	19	2672	-389538	367	235981	128817	-153557
ST ALBAN	25	4222	-512550	417	268131	146367	-244419
CP PENDL	29	3676	-594558	460	295780	161460	-298778
BEAUFORT	9	1375	-184510	147	94521	51597	-89997
GTMO BAY	0	10	0	3	1929	1053	1929
N LONDON	3	503	-61506	94	60442	32994	-1064
YOKOSUKA	1	182	-20502	17	10931	5967	-9571
L BEACH	44	6545	-902088	798	513114	280098	-388974
ROOS RDS	11	1460	-225522	159	102237	55809	-123285
SUBIC PI	1	234	-20502	60	38580	21060	18078
ORLANDO	20	4490	-410040	790	507970	277290	97930
LEMOORE	2	283	-41004	51	32793	17901	-8211
NAPLES	1	166	-20502	19	12217	6669	-8285
PHTUXENT	2	256	-41004	44	28292	15444	-12712
PT HUENE	10	1516	-205020	207	133101	72657	-71919
ROTA	0	32	0	15	9645	5265	9645
TAIPEI	0	122	0	24	15432	8424	15432
PORTS VA	84	12911	-1722168	1512	972216	530712	-749952
MC SDGO	103	15283	-2111706	1902	1222986	667602	-888720
CHASTON	40	4469	-820080	523	336289	183573	-483791
JAXVILLE	38	5215	-779076	721	463603	253071	-315473
NEWPORT	15	2146	-307530	337	216691	118287	-90839
TOTAL	879	131244	-18021258	15888	10215984	5576688	-7805274

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TABLE D-35
COST IMPLICATONS-NO RET DEP OUTPATIENTS

U1C	DELTA OPV	DELTA U1C COST	CHAMPUS COINS	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERNMENT
PORTS NH	5802	-92832	50	63822	34812	-29010
BOSTON	14649	-234384	50	161139	87894	-73245
PHILADEL.	17011	-272176	50	187120	102066	-85056
ANNAPOLS	11736	-187776	50	129096	70416	-58680
NMC BETH	0	0	50	0	0	0
AMC PENS	0	0	50	0	0	0
NH GTLK	16937	-270992	50	186306	101622	-84686
QUANTICO	5897	-94352	50	64867	35382	-29485
BRMERTON	24889	-398224	50	273778	149334	-124446
KEY WEST	4400	-70400	50	48400	26400	-22000
CCHRISTI	3454	-55264	50	37994	20724	-17270
GUAM	3478	-55648	50	38258	20868	-17390
CP LEJEN	6225	-99600	50	68475	37350	-31125
OAKLAND	46237	-739792	50	508606	277421	-231186
NH BETH	39829	-637264	50	438118	238973	-199146
NH PENS	24874	-397984	50	273613	149244	-124371
NDSBETH	0	0	50	0	0	0
NMS BETH	0	0	50	0	0	0
HCS GTLK	0	0	50	0	0	0
HCS SDGO	0	0	50	0	0	0
NSHABETH	0	0	50	0	0	0
AMI PENS	0	0	50	0	0	0
MEMPHIS	12399	-198384	50	136389	74394	-61995
ST ALBAN	17665	-282640	50	194314	105990	-88326
CP PENDL	19368	-309888	50	213048	116208	-96840
BEAUFORT	4429	-70864	50	48719	26574	-22145
GTMO BAY	1733	-27728	50	19063	10398	-8665
N LONDON	1988	-31808	50	21868	11928	-9940
YOKOSUKA	273	-4368	50	3003	1638	-1365
L BEACH	39958	-639328	50	439537	239748	-199791
ROOS RDS	6181	-98896	50	67991	37086	-30905
SUBIC PI	614	-9824	50	6754	3684	-3070
ORLANDO	39401	-630416	50	433410	236405	-197006
LEMOORE	1574	-25184	50	17314	9444	-7870
NAPLES	354	-5664	50	3894	2124	-1770
PATUXENT	1638	-26208	50	18018	9828	-8190
PT HUENE	12929	-206864	50	142219	77574	-64645
ROTA	369	-5904	50	4059	2214	-1845
TAIPEI	419	-6704	50	4609	2514	-2095
PORTS VA	37520	-600320	50	412720	225120	-187600
MC SDGO	66554	-1064864	50	732093	399324	-332771
CHASTON	12995	-207920	50	142945	77970	-64975
JAXVILLE	33597	-537552	50	369566	201581	-167986
NEWPORT	6135	-98160	50	67485	36810	-30675
TOTAL	543511	-8696176	50	5978610	3261062	-2717566

COST IMPLICATIONS-NO RET DEP PATIENTS

UIC	DELTA ADMISSIONS	DELTA OP BEDS	DELTA OPV	DELTA UIC COST	CHAMPUS COST-GOV	CHAMPUS COST-PAT	DELTA COST GOVERN
PORTS NH	196	10	5802	-297852	189850	103608	-108002
BOSTON	529	47	14649	-1197978	501206	273573	-696692
PHILADEL	873	60	17011	-1502296	748459	408489	-753837
ANNAPOLS	231	14	11736	-474804	277629	151497	-197175
NMC BETH	0	0	0	0	0	0	0
AMC PENS	0	0	0	0	0	0	0
NH GTLK	691	34	16937	-968060	630619	344163	-337441
QUANTICO	181	7	5897	-237866	181250	98913	-56616
BREMERTON	383	19	24884	-787767	520047	283767	-267715
KEY WEST	93	5	4440	-172910	108199	59043	-64711
CCHRISTI	237	10	3454	-260234	190385	103911	-69899
GUAM	137	6	3478	-178660	126349	68955	-52311
CP LEJEN	331	17	6225	-448134	281308	153531	-166826
OAKLAND	1440	74	46237	-2256940	1434526	782861	-822414
NH BETH	1449	102	39829	-2728468	1369825	747572	-1358643
NH PENS	450	17	24874	-746518	562963	307194	-183555
NDSBETH	0	0	0	0	0	0	0
NMS BETH	0	0	0	0	0	0	0
HCS GTLK	0	0	0	0	0	0	0
HCS SDGO	0	0	0	0	0	0	0
NSHABETH	0	0	0	0	0	0	0
AMI PENS	0	0	0	0	0	0	0
MEMPHIS	367	19	12399	-587922	372370	203211	-215552
ST ALBAN	417	25	17665	-795190	462445	252357	-332745
CP PENDL	460	29	19368	-904446	508828	277668	-395618
BEAUFORT	147	9	4429	-255382	143240	78171	-112142
GTMO BAY	3	0	1733	-27728	20992	11451	-6736
N LONDON	94	3	1988	-93314	82310	44922	-11004
YOKOSUKA	17	1	273	-24870	13934	7605	-10936
L BEACH	798	44	39958	-1541416	952651	519846	-588765
ROOS RDS	159	11	6181	-324413	170228	92895	-154190
SUBIC PI	60	1	614	-30326	45334	24744	15008
ORLANDO	790	20	39401	-1040456	941380	513695	-99076
LEMOORE	51	2	1574	-66188	50107	27345	-16081
NAPLES	19	1	354	-26166	16111	8793	-10055
PATUXENT	44	2	1638	-67212	46310	25272	-20902
PT HUENE	207	10	12929	-411884	275320	150231	-136564
ROTA	15	0	369	-5904	13704	7479	7800
TAIPEI	24	0	419	-6704	20041	10938	13337
PORTS VA	1512	84	37520	-2322488	1384936	755832	-937552
MC SDGO	1902	103	66554	-3176570	1955079	1066926	-1221491
CHASTON	523	40	12995	-1028000	479234	261543	-548766
JAXVILLE	721	38	33597	-1316628	833169	454652	-483459
NEWPORT	337	15	6135	-405690	284176	155097	-121514
TOTAL	15888	879	543511	-26717434	16194594	8837750	-10522840

APPENDIX E: UTILIZATION RATES

Utilization of Inpatient Services

The problem of extensive lengths of stay of active duty military personnel
has been identified in Chapter 4 of this report. It was inferred that this
is not a result of a different case mix but rather significantly different
lengths of stay for identical disease classifications. A second measure of
the rate of consumption of health services is the rate of incidence of
conditions that require hospitalization in either military or civilian
health care facilities. This Appendix provides our estimates of the rate
of consumption of hospital days and the rate of admissions per one thousand
members of the beneficiary population. The derived rates are compared with
the civilian sector in general and with the Kaiser Foundation Health Plan
and the Group Health Cooperative of Puget Sound in particular. These com-
parisons indicate that there is a shockingly high incidence of diseases
and injuries requiring hospitalization of the active duty population as
well as the extended lengths of stay associated with those admissions.
Additionally, the civilians who qualify for care in military facilities
and under CHAMPUS show patterns of utilization of inpatient health care
facilities similar to the civilian sector in general, but much higher than
that of either of the HMO's in California and Washington.

The most current population estimates available are those which have been
provided in the Medical and Dental Officers Billets Requirement Study Report
dated 1 June 1973. On Page 11 it provides the estimates of the population
supported as of 1 January 1973 which we have included as Table E-1. Of
course the number of active duty personnel is the most precisely identified.
It is estimated to be 786,281 members. The dependents of active duty per-
sonnel and their dependents were estimated to number 1,963,811. Those
unidentified as members of other beneficiary groups composed approximately
.5% of the total population served.

TABLE E-1

BENEFICIARY
POPULATION SUPPORTED

Active Duty Personnel	786,281	
Active Duty Dependents	908,297 ⎫	
Retired/Retired Dependent	1,055,514 ⎬	1,963,811
Other	14,967	
TOTAL	2,765,159	

Source: Medical and Dental Officers Billet Requirements
Study Report, dated 1 June 1973, p.11.

There are two primary sources of care available to this population, the first of which is that provided in military health care facilities. The number of admissions and occupied bed days which are provided by this source are reported in Statistics of Navy Medicine. Relevant data from that publication has been summarized in Table E-2. The number of admissions for active duty personnel, retired personnel, and the dependents of both retired and active duty personnel and other were reported to total 267,845. The average daily patient load is reported for these same beneficiary groups. By multiplying by 365 days we can determine the number of occupied bed days to the degree of accuracy permitted by the round-off error of the tabulated data. The total for the beneficiary population was 3,156,155 hospital days. Both the number of admissions and the number of occupied bed days include some which were generated by others than members of the above, described population. However, the Navy beneficiaries also consume services from the other branches of military service. As a result, there is some cancelation.

The net impact of this policy of care of other service beneficiaries can be estimated from Table E-3 which was supplied by the Directorate for Information Operations of OASD. For FY 1972 Table E-3 indicates that the Department of the Navy had an average daily patient load of 5373[1] active duty military. However, the average daily patient load for active duty Navy and Marine Corps was only 5173. On net, the Navy was caring for 200 more members of other services than other services were caring for their beneficiaries. This implies that the Navy active duty members generated 73,000 fewer OBD's than was reported in Table E-2 for active duty members. No similar data is available for the number of admissions; however, an adjustment can be made assuming that it would occur in the same proportion. Both of these adjustments have been made and the new figures are reported in Table E-2. A similar analysis of the civilian beneficiaries shows that on net the

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[1]There is a discrepancy in the ADPL reported by OASD and the Statistics of Navy Medicine. However, we have assumed that the relative amounts of care provided among the branches of service are accurate.

TABLE E-2

INPATIENT SERVICES PROVIDED

IN NAVAL MEDICAL FACILITIES

(FY 1972)

Beneficiary Group	Admissions	OBD (ADPL *365)
ACTIVE DUTY PERSONNEL	113,709	2,033,415
RETIRED PERSONNEL	23,606	313,900
DEPENDENTS OF ACTIVE DUTY AND RETIRED PERSONNEL	122,537	702,625
OTHER	7,993	106,215
TOTAL	267,845	3,156,155
ADJUSTMENT FOR NET EXCESS CARE PROVIDED BY NAVY TO OTHER BRANCHES OF SERVICE BENEFICI- ARIES (1- 5173/5373)	-4,233	-75,690

Source: STATISTICS OF NAVY MEDICINE FY 1972 p 2,8.

TABLE E-3

MEDICAL CARE PROVIDED
AT FIXED MILITARY MEDICAL
FACILITIES

WORLD-WIDE AVERAGES AND TOTALS – FISCAL YEARS 1969, 1970, 1971 and 1972

SELECTED DATA CONCERNING MEDICAL CARE PROVIDED AT FIXED MILITARY MEDICAL FACILITIES	Department of Defense				Department of the Army				Department of the Navy				Department of the Air Force			
	FY 1969	FY 1970	FY 1971	FY 1972	FY 1969	FY 1970	FY 1971	FY 1972	FY 1969	FY 1970	FY 1971	FY 1972	FY 1969	FY 1970	FY 1971	FY 1972
1. TOTAL NUMBER OF OPERATING BEDS	57,477	54,899	48,846	40,178	27,316	25,607	23,623	17,250	19,466	18,525	15,201	13,534	10,695	10,466	10,022	9,394
2. TOTAL NUMBER OF BEDS OCCUPIED (Daily Average)	43,610	38,491	32,438	26,969	20,348	17,820	14,851	11,921	14,875	12,916	10,333	8,501	8,387	7,755	7,254	6,547
3. TOTAL NUMBER OF ADMISSIONS	1,272,142	1,212,611	1,142,268	1,059,207	578,631	550,268	519,121	467,053	324,480	311,393	281,593	261,810	369,031	350,950	341,554	330,344
4. TOTAL NUMBER OF OUTPATIENT VISITS	53,376,229	52,996,391	51,822,457	50,254,616	21,655,410	21,563,206	21,579,145	20,834,731	14,092,592	14,152,537	13,457,542	13,047,890	17,628,227	17,280,648	16,785,770	16,371,995
5. NUMBER OF LIVE BIRTHS	146,145	148,711	147,832	132,574	58,561	60,990	63,000	56,258	37,174	37,203	38,115	34,121	50,410	50,518	46,717	42,195
6. BEDS OCCUPIED BY ACTIVE DUTY MILITARY	31,710	26,605	20,556	15,588	15,615	12,968	9,903	7,186	11,718	9,740	7,160	5,373	4,377	3,847	3,473	3,029
a. ARMY	15,936	13,485	10,289	7,282	14,620	12,266	9,308	6,659	930	886	641	519	386	369	319	134
b. NAVY-MARINE CORPS	11,512	9,295	6,803	5,173	681	396	328	262	10,580	8,570	6,370	4,826	251	145	105	85
c. AIR FORCE	4,262	3,825	3,494	3,195	314	306	267	235	205	172	169	163	3,740	3,333	3,055	2,710
7. BEDS OCCUPIED BY RETIRED UNIFORMED PERSONNEL	2,172	2,235	2,417	2,501	801	841	935	979	766	775	732	859	605	619	690	663
a. ARMY	660	906	982	1,030	595	631	697	731	125	131	131	174	140	144	154	125
b. NAVY-MARINE CORPS	735	738	768	797	86	88	104	105	559	558	566	620	90	92	78	72
c. AIR FORCE	555	569	643	653	116	120	131	140	71	72	78	93	368	377	434	420
d. OTHER	22	22	24	21	4	2	3	3	11	11	15	12	7	6	6	0
8. BEDS OCCUPIED BY DEPENDENTS OF UNIFORMED PERSONNEL	8,262	8,099	8,073	7,719	3,244	3,205	3,267	3,128	1,943	1,906	1,773	1,927	3,075	2,988	2,833	2,664
Percent of total beds occupied–occupied by dependents	18.9	21.0	24.9	28.6	15.9	18.0	22.0	26.2	13.1	14.7	19.1	22.7	36.7	38.5	39.1	40.7
a. BY DEPENDENTS OF PVT, CG & GS	59	58	61	61	15	12	14	14	30	31	33	35	14	15	12	12
b. BY DEPENDENTS OF ACTIVE DUTY MIL PERS	5,144	5,903	5,742	5,319	2,420	2,353	2,344	2,194	1,345	1,280	1,279	1,240	2,351	2,271	2,119	1,885
(1) ARMY	2,170	2,099	2,102	1,963	1,849	1,802	1,632	1,727	107	104	93	83	214	193	197	153
(2) NAVY-MARINE CORPS	1,429	1,378	1,379	1,267	198	197	182	166	1,111	1,054	1,085	1,025	120	127	112	76
(3) AIR FORCE	2,545	2,426	2,261	2,089	373	354	330	301	125	122	136	134	2,047	1,952	1,823	1,654
c. BY DEPENDENTS OF RETIRED AND DECEASED MILITARY PERSONNEL	2,060	2,138	2,270	2,339	810	840	909	920	570	598	642	691	630	702	719	728
(1) ARMY	816	843	895	903	565	592	633	633	96	109	112	117	155	149	150	153
(2) NAVY-MARINE CORPS	603	625	651	681	97	102	108	107	407	431	441	471	99	102	102	103
(3) AIR FORCE	641	670	724	755	148	146	168	160	67	73	89	96	426	451	467	472
9. BEDS OCCUPIED BY ALL OTHER BENEFICIARIES	1,466	1,552	1,392	1,161	688	806	746	628	448	445	295	340	330	301	255	191
10. NUMBER OF OUTPATIENT VISITS BY DEPENDENTS OF UNIFORMED PERSONNEL	23,677,873	23,885,605	24,416,110	24,647,938	8,668,457	8,741,048	9,039,910	9,278,446	5,607,552	5,773,844	6,128,161	6,306,176	9,401,864	9,370,713	9,248,039	9,063,316
Percent of total outpatient visits – Dependent visits	44.4	45.1	47.1	49.0	40.0	40.5	41.9	44.5	39.8	40.8	45.5	48.3	53.3	54.2	55.1	55.4
11. NUMBER OF OUTPATIENT VISITS BY DEPENDENTS OF ACTIVE DUTY UNIFORMED PERSONNEL	20,837,131	20,629,326	20,477,362	20,288,021	7,571,213	7,433,300	7,412,529	7,454,480	4,786,405	4,855,542	5,044,310	5,123,630	8,479,513	8,342,484	8,020,453	7,709,901
12. NUMBER OF OUTPATIENT VISITS BY RETIRED UNIFORMED PERSONNEL	1,813,575	2,033,555	2,287,523	2,628,174	728,061	832,565	927,678	1,031,657	509,000	569,960	638,747	758,835	576,514	631,030	721,098	757,682
13. NUMBER OF ADMISSIONS OF DEPENDENTS OF UNIFORMED PERSONNEL	505,809	503,910	514,946	502,384	193,328	197,459	206,555	204,109	117,939	117,632	134,267	122,528	194,632	188,819	154,124	175,747
Percent of total admissions – Dependent admissions	39.6	41.6	45.1	47.4	33.4	35.9	39.8	43.7	30.3	37.2	44.1	46.5	52.7	53.6	53.9	53.2
14. NUMBER OF ADMISSIONS OF DEPENDENTS OF ACTIVE DUTY MILITARY PERSONNEL	416,280	408,999	408,691	389,222	160,635	162,467	166,892	160,738	92,225	90,107	92,979	89,292	163,429	156,425	148,820	139,192
15. NUMBER OF ADMISSIONS OF RETIRED UNIFORMED PERSONNEL	59,557	62,994	70,738	77,913	21,178	23,064	26,306	30,048	18,478	19,541	21,391	23,624	19,901	20,689	23,041	24,241

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1/ Data operating and occupied beds reflect averages for the period. Data on admissions, live births and outpatient visits are totals for the period.

Source: DIRECTORATE OF INFORMATION OPERATIONS OASD

service given balances out, hence no adjustment is required.

The second source of care available to the civilian beneficiaries is that through CHAMPUS. The number of admissions and hospital days for Navy beneficiaries for FY 1972 can be found in the report M-738, the Statistical Phase Back Report processed through March 31, 1973, completed by OCHAMPUS. On Page 16, it is reported that Navy beneficiaries consumed 135,862 admissions and 1,820,792 hospital days. However, CHAMPUS provides significant amounts of long term psychiatric care. Report M-734 for calendar year 1972 reported that there were 30,885 admissions for mental disorders and a resulting 1,533,085 occupied bed days. These composed 7.53% of the total number of admissions and 42.54% of the total number of occupied bed days for that year. If we assume that Navy beneficiaries consumed these same proportions of health care services for mental disorders as the sum of Army, Navy, and Air Force CHAMPUS users, then we can adjust the number of admissions and occupied bed days for fiscal year 1972 to include only those for short term care. The result is 125,631 admissions and 622,184 occupied bed days. These calculations have been summarized as part of Table E-5.

The rate of utilization of health care services can be easily derived from three of the previous tables. This has been done and is reported in Table E-5. For the entire population, using the unadjusted CHAMPUS data, there were 142.4 admissions per thousand population and 1475.2 occupied bed days per thousand population. The rate for the active duty population was 139.2 admissions per thousand and 2489.9 occupied bed days per thousand. The civilian beneficiaries rates were 143.6 admissions per thousand and 1069.0 occupied bed days per thousand. If the adjusted CHAMPUS data is used, then for the total population the rate of admission per thousand is 138.6 with 1090.8 occupied bed days per thousand. Considering only the civilian beneficiaries the adjusted data indicated 138.4 admissions per thousand population and 834.5 occupied bed days. Apparently the admission rates are very similar for the active duty and civilian population. However, the number of occupied bed days is greatly inflated for the active duty member, due to the extended stay for each incidence.

TABLE E-4

INPATIENT SERVICES PROVIDED THROUGH CHAMPUS
(FY 1972)

Admissions	135,862
Hospital Days	1,082,739

Source: OCHAMPUS Report M738 processed through
March 31, 1973

ADJUSTMENT FOR MENTAL SERVICES

	Admissions	OBD
ICDA 290-315 (Mental Disorders)	30,885	1,533,085
TOTAL	410,137	3,604,203
% Accounted for by Mental Disorders	7.53%	42.54%

Source: OCHAMPUS Report M734 CY 1972

FY 1972 Navy Beneficiary Utilization adjusted not to include Mental Disorders	125,631	622,186

TABLE E-5

UTILIZATION RATE OF INPATIENT SERVICES

	Admissions/1000	OBD's/1000
ACTIVE DUTY PERSONNEL	139.2	2489.9
CIVILIAN BENEFICIARIES (Prior to adjustment for long term care) (Excluding "Other")	143.6	1069.0
TOTAL POPULATION	142.4	1475.2
CIVILIAN BENEFICIARIES (Adjusted to eliminate long term care)	138.4	834.5
TOTAL POPULATION (Adjusted to eliminate long term civilian care)	138.6	1090.8

Source: TABLES E-1, E-2, E-4

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SELECTED MEDICAL CARE UTILIZATION DATA COMPARING
GROUP HEALTH COOPERATIVE TO FOUR PUGET SOUND
COUNTIES* AND U.S.A. AVERAGES 1968-1971

	Four Puget Sound Counties*	Group Health Cooperative	U.S.A. Averages
Annual Outpatient Visits to Physicians Per Person			
1968	N.A.	3.9	3.2
1970	N.A.	4.0	N.A.
Annual Visits to Outpatient Facility (Including Physician's Office) Per Person			
1968	N.A.	N.A.	4.0
1970	N.A.	5.0	N.A.
Population Served (Jan-Feb 1971)	1,940,000	139,975	N.A.
Average No. Hosp. Beds/1000 Population			
1969	N.A.	1.5	4.1
1970	N.A.	1.3	N.A.
1971 (Jan-Feb)	3.4	1.4	N.A.
Hospital Admissions/1000 Population			
1969	N.A.	89	142
1970	N.A.	86	N.A.
Average Days in Hospital Per Admission			
1969	N.A.	4.9	8.3
1970	N.A.	4.7	8.2
Average Daily Hospital Census/1000 Population			
1969	N.A.	1.25	3.3
1970	N.A.	1.15	N.A.
1971 (Jan-Feb)	2.38	1.09	N.A.
Percent of Hospital Beds Occupied			
1969	N.A.	83	79
1970	N.A.	86	78
1971 (Jan-Feb)	70	80	N.A.
Miscellaneous Jan-Feb 1971 Comparisons			
Medicare hosp. adm. as % of all hosp. adm.	19.4	17.4	N.A.
Av. daily medicare census/1000 population	0.69	0.28	N.A.
Annual number surgical operations/1000 pop.	69	55	
Live births/1000 population	14.1	15.1	
Annual emergency room visits/1000 pop.	160	72	
Hosp. admissions per 100 E.R. visits	15	15	

N.A. = Not available at time of preparation of these data

*King, Snohomish, Pierce and Kitsap Counties

Source: Dr. Robert Hanschin, Group Health Cooperative of Puget Sound.

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These rates can be compared to the civilian population as a whole. In the American Medical Association's publication <u>Socio-Economic Issues of Health</u>, the 1972 edition, Table 27 reports Trends In Utilization in Community Hospitals, 1946-1970. For 1970, there were 145 admissions per one thousand population. That same table also reports that the average daily hospital census per one thousand population is 3.3. Again if we multiply 365 days, subject to round off error, the number of bed days per one thousand population is 1205. This is somewhat higher than the rates of the civilian beneficiaries and considerably lower than that of the active duty population. However, care should be taken in interpreting these comparisons due to the different age/sex composition of the population and mission requirements.

Within the civilian sector the pattern of utilization of inpatient services varies to the extreme. Three of the more significant independent variables appear to be age/sex and the contractual method used to finance the cost of health care services. The influence of this latter variable is most strikingly presented in the data which we have been provided by the Group Health Cooperative of Puget Sound, and that which is reported by the <u>Kaiser Permanente Medical Care Program</u>. Effects of each of the above will be discussed in turn, beginning with the impact of prepaid group service. Doctor Hanschin of Group Health has provided us with the comparisons included in Table E-5. If we concentrate only on the variables which we have been considering prior to this, we find that in 1969 Group Health reported 89 admissions per thousand members compared to 142 for the U.S. average. In the following year, Group Health reported 86 admissions per thousand population. Although not reported in Table E-7, we have noted previously that the AMA reported 145 admissions per thousand population in 1970. The number of bed days per thousand population can be constructed by multiplying the average daily hospital census times 365 days. Completing this calculation the results are: 1969 - 456 bed days per thousand population; 1970 - 420 bed days per thousand population; 1971 - (Jan. Feb.) 398 bed days per thousand population. The comparable rates of the civilian

sector are for 1969 and 1970 - 1205 hospital bed days per thousand population.

The Kaiser Foundation Health Plan provided similar utilization rates in the Kaiser Permanente Medical Care Program edited by Anne Somers. For 1969, they report that there were 78 discharges per 1000 population per year and 488 hospital days per thousand per year. These utilization rates are dependent in some part on the age and sex composition of the population served. The result of adjusting the Kaiser utilization data to represent the age and sex distribution of the total U.S. population is to increase the rate of discharges to 86 per thousand per year and the hospital bed days to 613 per thousand per year. The table which reported these rates by age and sex has been duplicated and is included here as Table E-7.

A further indication of the impact of age and sex on these two rates of hospital utilization can be seen from Tables E-8 and E-9. The two have been duplicated from Kaiser Permanente Medical Care Program and show these rates for the Kaiser Foundation Health Plan in the Northern California region for calendar year 1969. Table E-8 shows for the male population by five-year age intervals the hospital days and the discharges per thousand health plan members. The discharges per thousand in the age group which would be comparable to that of the active duty population (see Table E-10) is much lower than the population average, from 31-39 discharges per thousand health plan members and 215-264 hospital days per thousand health plan members. This is approximately 1/4 of the rate of admission of that reported for active duty personnel and 1/10 of the rate of consumption of hospital days.

Table E-9 reports the effect of age on the utilization of inpatient services for calendar year 1969 for female members of the Kaiser Foundation Health Plan in the Northern California region. The most significant difference in rates of utilization from those reported by males occurs during the child bearing years. The increased utilization in these years raises the number of discharges per thousand female health plan members to 100 per year, the

number of hospital days to 543. Both of these rates are less than those
calculated previously for the civilian beneficiary population supported
in Navy-Military facilities and under CHAMPUS.

The above analysis indicates that potential cost savings may exist if
utilization can be controlled. The active duty population consumes an order
of magnitude more health care than do their civilian counterparts. How much
of this can be justified due to mission requirements and other sociological
variables is as yet unknown. However, the economic incentives of the system
must play a major role in determining this effective demand. Apparently the
civilian beneficiaries consume health care services at approximately the
same rate as does the nation as a whole. This conclusion can only be
regarded as tentative due to the poor identification of the population itself
as well as its socio-economic characteristics. However, the budget con-
strained method of financing health care, which is the essence of the HMO
has done markedly better in coltrolling these rates of utilization then
either the military or civilian sector. The financial savings which result
are apparently not at the expense of the quality of care, but rather due to
the change in economic incentive in prepaid group practice where providers
benefit more from a healthy population then they do from one requiring
abundant medical services.

APPENDIX TABLE 14   Kaiser Foundation Health Plan, Northern California Region, 1969 Hospital Utilization Data, Age and Sex Adjusted to Selected Population Distributions

Age group	KFHP Northern California Region[a]			Percentage distribution		
	Hospital days per 1000 per year	Discharges per 1000 per year	Percent distribution membership	N. Calif. Region resident population[b]	California resident population[b]	U.S. total population[c]
			n = 903,826	n = 5,513,000	n = 19,797,000	n = 203,216,000
0–4	243	57	9.0%	8.4%	8.7%	8.8%
5–9	120	33	11.5	10.0	10.3	10.3
10–14	114	23	11.0	10.0	10.2	10.1
15–19	280	59	9.4	8.9	9.0	9.2
20–24	516	132	7.5	8.3	8.0	8.1
25–29	512	123	8.2	6.9	6.5	6.6
30–34	418	87	6.9	5.9	5.8	5.6
35–39	417	71	6.3	5.7	5.8	5.5
40–44	464	68	6.5	6.0	6.1	6.0
45–49	549	74	6.6	6.4	6.4	6.0
50–54	755	92	5.4	5.5	5.5	5.4
55–59	971	105	4.4	5.0	4.8	4.9
60–64	1,251	127	3.2	4.0	3.9	4.1
65–69	1,796	163	2.0	3.2	3.2	3.3
70–74	2,236	207	1.2	2.4	2.4	2.5
75–79	2,598	228	0.6	1.7	1.7	1.9
80–84	3,410	309	0.2	1.1	1.1	1.1
85+	4,031	389	0.1	0.6	0.6	0.6
All ages	488	78	100.0	100.0	100.0	100.0

	Kaiser Foundation Health Plan utilization data adjusted to selected population distributions		
	N. Calif. Region resident population	California resident population	U.S. total population
A. Age adjustment only:			
Hospital days/1000/year	615	611	620
Discharges/1000/year	88	87	88
B. Age and sex adjustment:[d]			
Hospital days/1000/year	605	604	613
Discharges/1000/year	87	86	86

a. Calendar year 1969 data.

b. Estimated distribution at July 1, 1970, per California Department of Finance data.

c. Estimated distribution at July 1, 1969, per U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P–25, no. 441, Table 1.

d. See Appendix Table 15.

Source: Sommers, Anne (editor) The Kaiser-Permanente Medical Care Program, The Commonwealth Fund, 1971, p 208.

TABLE E-8

Hospital Days and Discharges,

Males, By Age Group

APPENDIX TABLE 12   Kaiser Foundation Health Plan, Northern
California Region, Hospital Utilization by Age Group, Males,
Calendar Year 1969

Age group	Percent distribution Health Plan males N = 447,634	Hospital days per 1000 Health Plan males	Discharges per 1000 Health Plan males	Average length of stay (days)
All ages	100.0%	432	57	7.6
0–4	9.2	281	68	4.1
5–9	11.9	142	38	3.7
10–14	11.4	135	26	5.1
15–19	9.5	239	35	6.9
20–24	6.4	215	31	6.9
25–29	7.8	219	31	7.1
30–34	7.0	200	33	6.0
35–39	6.4	264	39	6.7
40–44	6.4	392	48	8.2
45–49	6.5	483	57	8.5
50–54	5.4	684	81	8.5
55–59	4.5	1,032	107	9.6
60–64	3.4	1,413	142	10.0
65–69	2.0	2,036	187	10.9
70–74	1.3	2,495	237	10.5
75–79	0.6	3,062	277	11.0
80–84	0.2	3,404	324	10.5
85+	0.1	4,614	448	10.3
0–19	42.0	193	41	4.7
20–44	34.0	255	36	7.1
45–64	19.8	820	89	9.2
65+	4.2	2,442	227	10.7

Source: Sommers, Anne, (editor), The Kaiser
Permanente Medical Care Program, The Common-
wealth Fund, 1971, p 206.

TABLE E-9

Hospital Days and Discharges,
Females, by Age Group

APPENDIX TABLE 13   Kaiser Foundation Health Plan, Northern California Region, Hospital Utilization by Age Group, Females, Calendar Year 1969

Age group	Percent distribution Health Plan females N = 456,192	Hospital days per 1000 Health Plan females	Discharges per 1000 Health Plan females	Average length of stay (days)
All ages	100.0%	543	100	5.4
0–4	8.7	203	46	4.4
5–9	11.2	96	27	3.6
10–14	10.8	93	19	4.8
15–19	9.2	321	83	3.9
20–24	8.5	738	207	3.6
25–29	8.6	772	205	3.8
30–34	6.8	641	142	4.5
35–39	6.2	573	103	5.6
40–44	6.6	533	88	6.1
45–49	6.7	612	90	6.8
50–54	5.3	826	103	8.0
55–59	4.3	910	103	8.8
60–64	3.1	1,078	111	9.7
65–69	2.0	1,555	139	11.2
70–74	1.2	1,976	175	11.3
75–79	0.5	2,108	176	12.0
80–84	0.2	3,418	288	11.9
85+	0.1	3,033	289	10.5
0–19	39.9	171	42	4.1
20–44	36.7	663	156	4.3
45–64	19.4	811	100	8.1
65+	4.0	1,856	163	11.4

Source: Somers, Anne, The Kaiser Permanente Medical Care Program, The Commonwealth Fund, 1971, p 207.

TABLE E-10

AGE-SEX-PERCENTAGE DISTRIBUTION OF THE ACTIVE DUTY U.S. NAVY POPULATION

As of 31 December 1972

AGE GROUPING	BOTH SEXES	MALE	FEMALE
15-24	57.6%	56.5%	1.1%
25-34	27.4	27.1	.3
35-44	12.9	12.8	.1
45-54	1.9	1.9	.05
55-64	.1	.1	NS

ACTUAL POPULATION BY AGE-SEX

AGE GROUPING	BOTH SEXES	MALE	FEMALE
15-24	332,108	325,483	6,625
25-34	158,019	156,314	1,705
35-44	74,203	73,509	694
45-54	11,204	10,895	309
55-64	784	727	57

Source: NAVPERS 15658, Navy and Marine Corps Military Personnel Statistics, 31 December 1972, P84-85 and 89

Source: Health Personnel All-Volunteer Task Force, Phase II Report, OASD (H&E), Oct. 1973, Vol. III, p. 4 0.15

Utilization Of Outpatient Services

The rate of consumption of outpatient services can also be derived using
the population estimates of Table E-1 and additional data from Statistics
of Navy Medicine and the Statistical Phase Back Report. The standard
comparison is the number of outpatient visits per member of the beneficiary
population. Of course, this is the grossest of comparisons in that an out-
patient visit isn't a homogeneous unit but rather can involve a wide range
of services differing in degree of sophistication. Additionally, different
organizations may define what constitutes an outpatient visit on the basis
of different criteria. Finally, the socio-economic characteristics of the
population served can be pivotal in determining the average rate of utili-
zation. With the above caveats in mind, however, we will examine the
starting point, i.e., the rate of consumption of outpatient visits by the
active duty population and their dependents.

Statistics of Navy Medicine for Fiscal Year 1972 reports the number of out-
patient visits at Naval medical facilities for that year on pages 12 and 13.
It shows a total of 6,761,841 outpatient visits for active duty personnel.
Of these, less than 5% were generated by other than the Navy and Marine
Corps personnel. The active duty dependents consumed 5,123,709 outpatient
visits during the fiscal year. Additionally, dependents were supplied
outpatient visits from the civilian sector through CHAMPUS and to some extent
at their own expense. For FY 1972, CHAMPUS reports that for the Navy and
Marine Corps dependent population there were 49,415 claims for outpatient
services. On the average, there were 3.2 outpatient visits per claim,
implying there were 158,128 outpatient visits paid for in part by CHAMPUS.
The quantity of outpatient visits unreported has not been estimated. The
total number of reported outpatient visits for the active duty dependents
then is 5,281,837. This data is summarized in Table E-11.

The rate of utilization of these services is then easily determined using
the results of Table E-11 and Table E-1. In FY 1972, the active duty
population consumed 8.6 outpatient visits per member. The dependent

TABLE E-11
OUTPATIENT VISITS

ACTIVE DUTY PERSONNEL   6,761,841
DEPENDENTS
    AT NAVAL FACILITIES   5,123,709
    CHAMPUS   158,128

                                                         5,281,837
TOTAL   12,043,678

Source: Statistics of Navy Medicine, Fiscal Year 1972

consumed 5.8 outpatient visits per member, although this latter figure may
be underreported due to the deductible provision of CHAMPUS. There has been
no adjustment for the net difference in the amount of care given by the Navy
to members of the other branches of the uniformed services, nor for the
amount of care other services provide Navy beneficiaries as there is no data
to support such a calculation. Additionally, since the amount provided to
the non-Navy and Marine Corps active duty population is less then 5% of the
total we anticipate that no substantial difference would result. The above
results are summarized in Table E-12.

These rates of consumption of outpatient visits may be compared with those
reported for the civilian sector. Table E-6 reported the number of visits
to outpatient facilities for both Group Health and United States. In 1968,
there were 3.9 visits to physicians per person in Group Health and 3.2 for
the nation as a whole. In 1970 the Group Health average had risen to 4.0
visits per person. The number of visits to the outpatient facility were
somewhat higher for both the United States and Group Health. In 1968, the
U.S. average was 4.0 outpatient visits per person as compared to the Group
Health average in 1970 of 5.0.

Additional information about the civilian sector is available in NMC-29,
Theoretical Implications for Co-Insurance. The results discussed there
will be briefly summarized here. Tables I, III, IV, and V from that
working paper have been reproduced and included here. Each table is
identified by its number plus the suffix Z. Table IZ reports the number of
physician visits per person per year for 1968 and 1969 by sex and age.
For both 1968 and 1969, males of the age 17-44 in the civilian sector con-
sumed approximately 3.1 physician visits per person per year. For all ages
for both years, the males consumed 3.7 physician visits per person per year
and the females consumed 4.6 and 4.7 physician visits per year.

Table IIIZ reports the number of doctor and office visits per thousand
members for the Kaiser Foundation Health Plan of Portland, Oregon.

TABLE E-12

RATE OF CONSUMPTION OF

OUTPATIENT VISITS

ACTIVE DUTY PERSONNEL	VISITS/PERSON
6,761,841 ÷ 786,281	8.6
ACTIVE DUTY DEPENDENTS	
5,281,837 ÷ 908,297	5.8

TABLE I Z

NUMBER OF PHYSICIAN VISITS PER PERSON PER YEAR, 1968 AND 1969

Year and Sex	All Ages	Under 17 Years	17-24 Years	25-44 Years	45-64 Years	65-74 Years	75 Years and Older
1968							
Both Sexes	4.2	3.4	4.2	4.2	4.7	5.6	5.9
Male	3.7	3.6	3.0	3.1	4.2	5.4	5.5
Female	4.6	3.3	5.2	5.1	5.2	5.7	6.2
1969							
Both Sexes	4.3	3.6	4.0	4.3	4.7	6.1	6.2
Male	3.7	3.7	3.0	3.2	4.1	5.5	5.5
Female	4.7	3.4	4.8	5.3	5.2	6.6	6.7

Source: Socio-economic Issues of Health

TABLE III Z

Kaiser Foundation Health Plan, Portland Region, Utilization by
OEO Membership and Remainder of Portland Kaiser Membership (under 65),
1970

	OEO	Remainder of Health Plan (under 65)	OEO % greater
Doctor office visits per 1000 members	3,645	3,270	11.5
Hospital days per 1000 members	428	375	14.1
Average length of stay in hospital	4.5	4.8	−6.3
Xray procedures per 1000 members	743	794	−6.4
Laboratory procedures per 1000 members	3,444	3,673	−10.0
Average population during year	6,802	123,613	

Source: Hurtado, Arnold et al., Home Care and Extended
Care in a Comprehensive Prepayment Plan, Hospital Research
and Educational Trust, 1972.

The comparison shown is between a low income population sponsored by the
Office of Economic Opportunity and the remainder of the health plan. The
OEO members consumed 3.6 doctor office visits per person compared to 3.3 for
the health plan members.

Tables IVZ and VZ report the results of the institution of a 25% co-insurance
at the Palo Alto Clinic. Prior to 1966, a co-insurance rate of 25% was in-
troduced and was in effect throughout 1968. The population reported in those
tables were members for both 1966 and 1968. Table IVZ reports that there
were 5.7 physician visits per member in 1966 and 4.3 physician visits per
member in 1968. Table VZ presents this same data cross tabulated by sex,
age and occupation. For the male members of the population, in 1966, they
consumed 5.0 outpatient visits per member and in 1968, 3.9 visits per member.
The age group 19-44 consumed less than this average. In 1966, that age group
consumed 3.4 visits per member and in 1968 consumed only 1.7 visits. The age
group 25-44 averaged 4.1 visits in 1966 and 3.3 visits in 1968. The female
population consumed outpatient visits at a higher rate than their male counter-
parts, but experienced the same relative reduction when the co-insurance rates
were in effect in 1968.

The remarks which concluded the main text are appropriate here also. The
active duty population consumes significantly more medical resources than
similar populations in the civilian sector. Does this occur, at least in
part, due to administrative processing? Mission requirements? Environ-
mental factors? Or is the high rate of utilization a function of the incen-
tives facing both the provider and consumers of the medical services?
Clearly this bears closer examination.

TABLE IVZ

-Per capita number and per capita cost of physician visits and of outpatient ancillary services, by type of service, 1966 and 1968

Type of service	1966	1968	Percent-age change	Percent-age change, age-adjusted [1]
	Per capita number			
Physician visits, total............	5.683	4.315	—24.1	—24.8
Outpatient ancillary services, total.................	6.026	5.349	—11.2	—16.6
Laboratory tests.................	3.743	3.231	—13.7	—19.2
X-rays........................	.606	.534	—11.9	—19.6
All other......................	1.677	1.584	—5.5	—9.7
	Per capita cost [2]			
Physician visits, total............	$78.47	$59.81	—23.8	—25.7
Outpatient ancillary services, total.................	30.91	27.37	—11.5	—19.2
Laboratory tests.................	13.02	12.47	—4.2	—10.0
X-rays........................	8.55	7.61	—11.0	—20.4
All other......................	9.34	7.29	—21.9	—30.2

[1] Age adjusted by applying the 1968 age distribution of male and female members aged 2-62 for all occupations to the utilization rates of the different age-sex-occupation groups, with children under age 2 in 1966 and persons aged 63 and over in 1968 excluded. Since this correction in most instances did not change the results very much, the calculations were not made for all tables.

[2] The services received by GIIP members in 1966 and 1968 were priced in terms of the 1968 fee schedules of the different departments of the Palo Alto Medical Clinic. The 1968 figures relate to costs before the 25-percent coinsurance payment.

Source: Scitovsky, Anne A. and Snyder, Nelda M., "Effect of Co-Insurance on the Use of Physician Services," Social Security Bulletin, June, 1972.

TABLE V Z

Per capita number of physician visits by age, occupation, and sex, 1966 and 1968

Age	All occupations			Faculty			Other professional staff			Nonprofessional staff		
	1966	1968	Percentage change	1966	1968	Percentage change	1966	1968	Percentage change	1966	1968	Percentage change
Male												
All ages	5.048	3.868	−23.4	5.359	4.168	−22.2	4.945	3.547	−28.3	4.589	3.874	−15.6
Age-adjusted			−22.8			−20.2			−26.7			−20.2
Under 5	5.919	4.582	−22.6	6.140	5.370	−12.5	6.131	4.452	−27.4	4.077	2.667	−34.6
2–4 [1]	3.922	4.582	+16.8	3.960	5.370	+35.6	4.088	4.452	+8.9	2.600	2.667	+2.6
5–14	5.142	3.670	−28.6	5.556	4.206	−24.3	5.148	3.583	−30.4	4.021	2.231	−44.5
15–18	4.694	3.620	−22.9	4.848	4.000	−17.5	5.029	4.103	−18.4	4.067	2.333	−42.6
19–24	3.400	1.686	−50.4	2.000	1.160	−42.0	4.300	1.720	−60.0	3.727	2.300	−38.3
25–44	4.068	3.253	−20.0	4.618	3.959	−14.3	3.713	3.060	−19.2	3.704	2.250	−39.3
45–64	5.967	4.896	−17.9	6.007	4.591	−23.6	6.103	4.214	−31.0	5.758	6.180	+7.8
45–62 [1]	5.967	4.851	−18.7	6.007	4.455	−25.8	6.103	4.218	−30.9	5.758	6.402	+11.2
Female												
All ages	6.297	4.746	−24.6	6.312	4.811	−23.8	6.024	4.676	−22.4	6.729	4.753	−29.4
Age-adjusted			−26.3			−28.1			−21.0			−32.4
Under 5	5.946	5.200	−12.5	5.978	6.333	+5.9	6.018	4.577	−23.9	5.455	3.143	−42.4
2–4 [1]	5.477	5.200	−5.1	5.966	6.333	+6.2	5.355	4.577	−14.5	3.400	3.143	−7.6
5–14	4.143	3.238	−21.8	4.521	3.674	−18.7	4.125	3.206	−22.3	2.816	1.559	−44.6
15–18	4.317	3.686	−14.6	3.805	4.071	+7.0	4.462	3.978	−10.8	5.467	1.941	−64.5
19–24	5.865	1.982	−66.2	2.667	1.893	−29.0	7.250	1.850	−74.5	7.667	2.625	−65.8
25–44	7.022	5.328	−24.1	7.267	4.781	−34.2	6.782	5.750	−15.2	7.055	5.457	−22.7
45–64	7.994	5.959	−25.5	8.602	6.522	−24.2	7.667	5.770	−24.7	7.732	5.604	−27.5
45–62 [1]	7.994	5.582	−30.2	8.602	5.612	−34.8	7.667	5.709	−25.5	7.732	5.459	−29.4

[1] Only persons who were GHP members the full 12 months of both 1966 and 1968 were included in the study; the data therefore exclude children under age 2 in 1968 and persons aged 63 and over in 1966.

Source: Scitovsky, Anne A. and Snyder, Nelda M., "Effect of Co-Insurance on the Use of Physican Services," Social Security Bulletin, June, 1972.